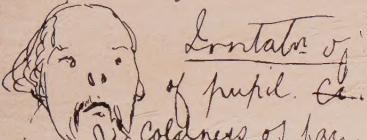


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# OF FLAME AND CLAY

Dialogues On Mind-Body Interaction



Annals of the  
**WILLIAM  
JAMES  
SEMINARS**

Volume II, 1982-1986

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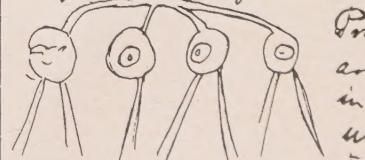
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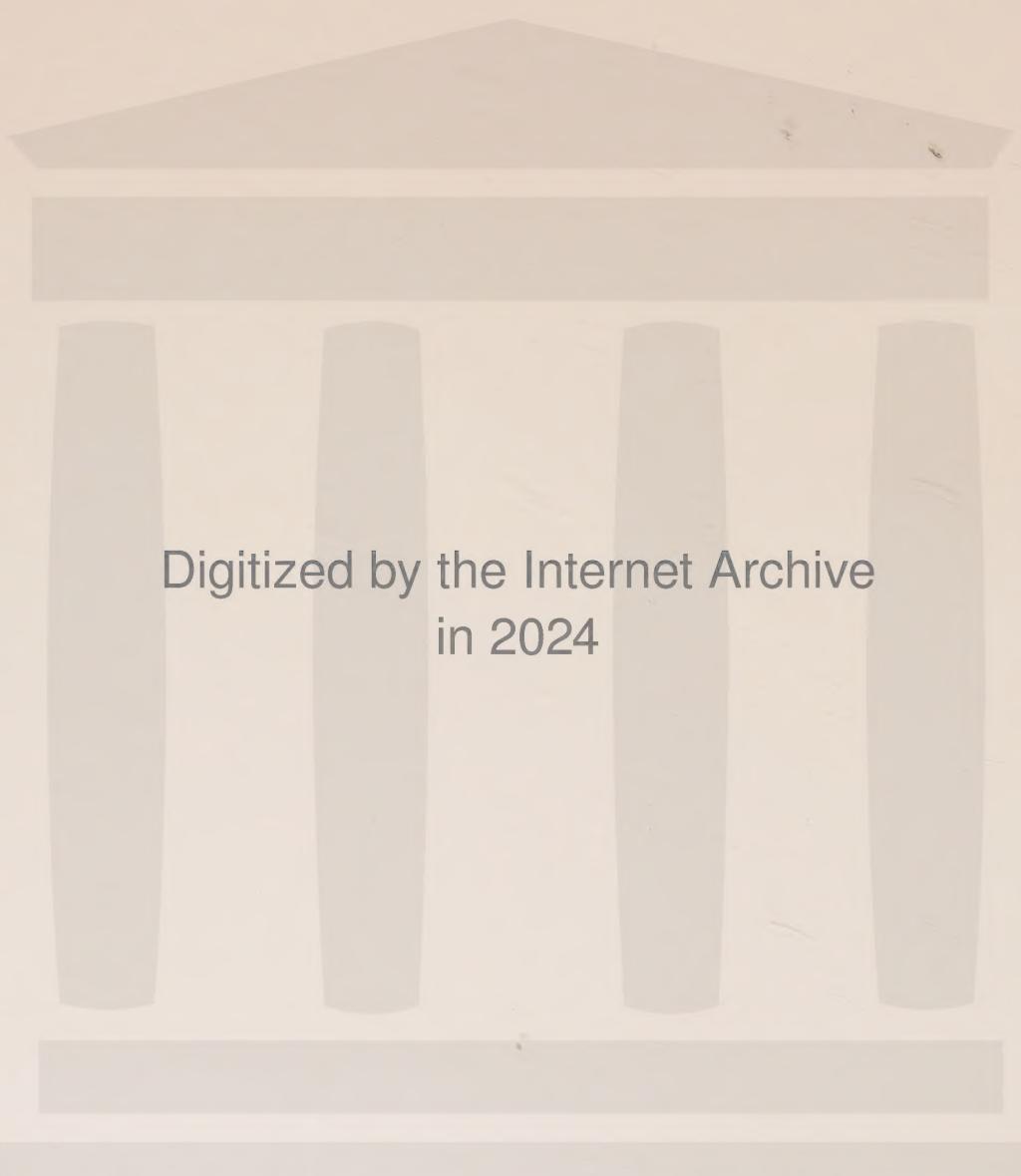
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# **OF FLAME AND CLAY**

Dialogues On Mind-Body Interaction

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Annals of the **William James Seminars** Volume II, 1982-1986

Note on the cover: The class notes and doodles on the cover are taken from the Harvard Medical School student notebooks of William James, 1863-1869. The photograph of James was taken in 1873; he was 31. The cover was designed by Mark Regnier.

# **OF FLAME AND CLAY**

## **Dialogues On Mind-Body Interaction**

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Annals of the  
**William James Seminars**  
Volume II, 1982-1986

Written by  
The Members of the William James Seminar,  
Assembly 1982

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Compiled by Jeffrey Saver

**WJP**

The William James Printers  
Boston

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The . . . reader who wishes to give a tinge of mystery to the expression of his positivism can continue to say that nature in her unfathomable designs has mixed us of clay and flame, of brain and mind, that the two things hang indubitably together and determine each other's being, but how or why, no mortal may ever know.

-William James, *The Principles of Psychology*, 1890



# FOREWORD

The William James Seminars are named for one of Harvard Medical School's most remarkable graduates. James' interdisciplinary achievements in physiology and philosophy constitute a continuing inspiration for our intellectual work; his open mind, his wit, his devotion to teaching, and his affectionate nature make him a most worthy role model for our personal goals.

The 1982 William James Seminar, whose meetings are reported here, was attended by faculty and students who had found a common interest in mind-body interactions during their work in the Fall of 1982 in Psychiatry 700a, "Behavioral Science in Medicine", the introductory course in psychiatry at the Harvard Medical School. This was the second such group to be formed, and we invited second year students who had become interested by what they heard about the 1981 seminar, and newly arrived first year students, to participate.

As the title of this volume denotes, the seminar's intellectual theme was that perennial conundrum, the mind-body problem. Because of his previous interest in this aspect of philosophy - and with his shared reverence for William James - Jeff Saver became the student leader of the group. His even-handed, strong and consistent guidance was crucial to the success of this seminar. Jeff has also worked hard to produce this volume.

My own original impulse was to combine the 1981 and 1982 groups but the students would not hear of it. I think they were wise to insist on developing their own special ambiance. They were helped enormously by their faculty leader, Alan Green, who gave so freely of his time and experience in setting a strong example of the personally dedicated physician. I felt both proud and privileged to participate in this very special educational process.

J. Allan Hobson, M.D.  
Harvard Medical School  
Boston, Massachusetts



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# PREFACE

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The real challenge of a medical education lies not in the assuring that factual knowledge and technical skills are acquired, but that compassion, caring, and curiosity are not lost. The nature of medical training--the large body of material that must be mastered, the demanding hours of ward work, the daily violation of ordinary rules against intruding, physically and emotionally, upon the privacy of one's fellow man--inevitably transforms those who enter upon a medical life. "Medicine would pay, and I would still be dealing with subjects which interest me," William James wrote to a cousin in 1863, "but how much drudgery and of what an unpleasant kind there is." The members of the William James Seminar, Assembly '82, whose experience is recorded here, found one response to this challenge in a "longitudinal, interdisciplinary student-faculty seminar on mind-body interaction". The seminar supplemented the passive, frequently dry learning of the lecture hall with active, spirited discussions of the riddles, solved and unsolved, of behavioral medicine and of medical training. The records of the seminar's discussions collected in this volume provides the reader with one measure of the success of this experiment.

Assembly '82 consisted of 4 faculty members and 17 students at Harvard Medical School who convened once every month for three and one-half years at different seminar members' homes. Of Flame and Clay encompasses the entire history of the Assembly, from its founding in Allan Hobson's living room in December, 1982 to its (temporary) disbanding in William Dean Howell's living room in June, 1986.

The Assembly's meetings generally were led by a rotating student member (the "Presenter") who chose the subject for the evening's discussion, distributed readings in advance of the session, introduced the topic with a brief conceptual overview, and guided the ensuing deliberations. Following each gathering, a different student member of the seminar (the "Correspondent") composed a brief account of the evening's discussions which was circulated to all seminar members. It is these texts that are gathered together in Of Flame and Clay. As the reader will soon discover, the accounts were written by many different authors in a variety of styles. They were revised only very lightly for publication in this compendium, in part because their creative diversity both captures and exemplifies the spirit of freely-associative, continually unfolding discovery that characterized seminar sessions themselves.

Four of the accounts of early meetings of Assembly '82 that appear here were first developed in their present form for inclusion in The Ragged Edge, a collection of selected records of the first two William James Seminar cohorts. They (chapters 2,3,5 and 7) are reprinted here in order to make available a complete record of the experience of Assembly '82 in a single, unified volume.

A few words on how the matter of confidentiality was handled in these accounts would be helpful. Matters of mind and body, and of medical training, are often of a quite sensitive nature. Early in the life of the Assembly, members agreed that meetings should be recorded in a manner that did not compromise the free and uninhibited interchanges so vital to the life of the seminar. After experimenting with various arrangements, the group adopted for this volume the following procedure. Members were given an opportunity to review all passages and statements attributed to them, and both Alan Green and I reviewed the entire text. The few passages felt to be of a possibly delicate nature were anonymously attributed to "seminar member" rather than a particular discussant, or were simply not included in the final text. The final decision on revision of a passage was left to the involved seminar members themselves. Identifying elements in descriptions of several patients who were discussed were also altered to preserve confidentiality.

The compilation of this volume would not have been possible without the support of a number of warmhearted individuals. I am indebted to the authors of this work, my fellow student members of Seminar '82, for uncomplainingly returning to their raw notes and writing or rewriting portions of the meeting accounts especially for this volume. It is a pleasure also to be able to thank them here for the penetrating insights and imaginative perspectives they shared with me and with each other over the three and one half year life of the Assembly.

Alan Green patiently read the entire manuscript and provided perceptive suggestions throughout its preparation. I would also like to thank him for his unflagging energy and support as (faculty) co-coordinator of Assembly '82. I, of course, bear responsibility for any textual revisions requested by members which failed to be incorporated into the final text.

Allan Hobson approved the preparation of the collection, and also made numerous insightful contributions to its design. I thank him too for creating the world of the William James Seminars, and giving us all a place within it.

Noreene Storrie oversaw the entire production process with her characteristic enthusiasm and efficiency; the volume would not have appeared without her. Funding support for several of the meetings of the seminar collected here, and for publication of this collection, has been provided by a grant from the Exxon Education Foundation. Mark Regnier designed both the interior graphics and the cover. The overall design of the volume also owes much to the work and advice of the compiler of its predecessor, The Annals of the William James Seminar, Volume I, Steven Denlinger. Becky Gibson, Jane Liccardello, and Chris Lindsay skillfully typed large portions of the text. (I would like also to express my loving thanks to my parents for their unfailing support and understanding, and to Kay, who daily reminds me that "to miss the joy is to miss all" and then assures that I shall not want for joy.)

Lastly, on behalf of the seminar's student members, I would like to extend deepest thanks and appreciation to the four faculty members of Assembly '82 who bestowed upon us so much of their time, energy, and wisdom: Drs. Alan I. Green, Robert M. Goisman, J. Allan Hobson, and Steve Stelovich. In a university, William James wrote, "Organization and method mean much, but contagious human characters mean more." He surely would have been pleased to discover these remarkable, and "infectious," exemplars of the humanistic, integrative practice of medicine on the faculty of his alma mater. We certainly count ourselves privileged to have assembled in their company.

Jeffrey Saver  
Brookline, Massachusetts  
May 23, 1986



# INTRODUCTION

---

It is rare enough for students and faculty to get together informally; how much more so if they meet on a monthly basis around a topic of interest over a period of four years. The concept of the William James Seminar is undoubtedly not new, yet the present application at the Harvard Medical School has been at least unusual. The structure is very simple. A group of about twenty students and four faculty members convene on a monthly basis for three and one half years. Usually there are topics for discussion at these monthly meetings, but the rule has wavered at times. The overarching framework of the seminar is the interaction between mind and body, psyche and soma. But within the mind-body structure the topics range far and wide. The meetings take place on a rotating basis in student or faculty apartments or homes. For most of these years, the attendance has been nearly full.

What makes this seminar so different from other activities of the Medical School? For one thing, it is voluntary--for both students and faculty. No grades are given. No internships secured. No departmental bonuses gathered. And the members make a commitment to try to attend regularly; the level of interest did not flag even through the busiest clinical rotations of a student's life. I suspect the secret of the commitment is two-fold: a group-wide respect for the endeavor itself; and a clear set of rewards for all concerned. Even apart from the topics covered and the material learned, the student would seem to benefit from the longitudinal experience itself. The seminar becomes a safe haven for sharing school or life experiences.

As a faculty member, I understand the faculty perspective better. The four faculty have also made a commitment. On a number of occasions various students have asked us why do we come, why do we spend the time? I can best answer by pointing to the luxury of having informal contacts with a large group of students. That opportunity has allowed us to gather a feeling for the next generation of medicine. And, in addition, the students function as a very useful sounding board for ideas. Their unusual perspective, so different from that of a colleague, not infrequently startles, but is often of great value. After a time, the student-faculty boundaries blur a bit; group cohesiveness becomes an important driving force in the seminar.

In the fall of 1981, Allan Hobson, the course director of Psychiatry 700a, asked students if they would be interested in joining a student-faculty seminar on mind-body phenomena. About thirty joined and the William James Seminars were begun. Allan was the faculty coordinator of the first seminar and I was a faculty member; we switched roles for the second, called Cohort 1982. The two groups shared many things, yet there were differences between them. An important

shared commodity was a student leader who rose from the ranks and took upon himself the responsibility for organization and direction of the seminar. Steve Denlinger in 1981 and Jeffrey Saver in 1982 filled these roles and made the Seminars a student run experience. The students decided the format, topics, meeting locations, membership, and the usefulness of making record of the seminars to follow. Where one group may have stressed more the reading of medical literature, and the other may have swayed more toward experiential discussions with readings used only as a spring board, even these distinctions were minimal; the groups were more alike than different.

That said, the 1982 group has been remarkable. A perusal of some of the meeting topics illustrates the breadth of the discussions: "The Melancholy of William James," "Hypnosis and the Abysses of our Nature," "The Nature of Love," "Transference and Counter-transference," "Insanity and the Law." As time went on, the discussion became more clinically oriented. But the topics were not limited to psychiatry. And most of the students are not planning to become psychiatrists.

As I watched the students change over the years, I relived my own medical school years. Once again I could see the cadaver; I could feel the helplessness of my first patient interview, the euphoria after finding the hidden diagnosis, or the anger about mechanistic medicine. It was all there. And as I watched, the students developed slowly and gradually until one day I realized that they had become my colleagues. I do not think a fine novelist could describe this developmental process with greater precision than the students themselves in the cumulated transcripts of the meetings.

A word about the notes is in order. There was some controversy about the use of names and the issue of confidentiality. The way around these problems varied over time; each set of notes was written by a different student. Yet I believe that the total document, multi-authored and multi-styled as it is, reflects the gathering crescendo of a medical student's life.

Many different individuals have put enormous time and effort into the making of this compendium. Jeffrey Saver has done much of the planning and legwork, and prodded us to meet deadlines. The effort, however, has been a joint one, stimulated by the wish to document what has seemed to be an unusual experience in the history of the Harvard Medical School. Perhaps other years and other students and other schools may find the William James Seminar model of value.

Alan I. Green M.D.  
May, 1986

---

The Members of the Seminar

"There is, thank Heaven! a plane below all formulas and below enmities due to formulas, where men (and women) occasionally meet each other moving, and recognize each other as brothers (and sisters) inhabiting the same depths."

Letter to G.H. Howison, 1885

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## Members and Participants

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## William James Seminars, Assembly 1982

---



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Members

---

# Members

## Back Row (left to right)

1 Chris Austin  
2 Lee Learman  
3 James Gaudet  
4 Jeffrey Saver  
(Student Coordinator)

## Middle Row (left to right)

5 Tal Laor  
6 Scott Solomon  
7 Anya Hurlbert  
8 Alan Green  
(Faculty Coordinator)  
9 Robert Goisman  
(Faculty Member)  
10 Jennifer Stone

## Front Row (left to right)

11 Sarah Feldman  
12 Shelly Greenfield  
13 Jennifer Haas  
14 Allan Hobson  
(Founder & Faculty)  
15 Elizabeth Mort

## Not Pictured

Dan Barboriak  
Teresa Benacquista  
Steven Denlinger  
Linda Leum  
Val Slayton  
Steve Stelovich  
(Faculty Member)



## Photo Key

### Participants

Hughes Evans  
William Fletcher  
Jed Nuchtern  
Linda Starace  
John Triedman



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December 18, 1982

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BEGINNINGS:  
THE  
ORGANIZATIONAL  
MEETING

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Chapter 1

Beginnings: The Organizational Meeting  
Meeting of 23 December 1982

Host: Allan Hobson

Correspondent: Allan Hobson

"When I get home let's establish a philosophical society to have regular meetings and discuss none but the very tallest and broadest questions--to be composed of none but the very topmost cream of Boston manhood (and womanhood). It will give each one a chance to air his own opinion in a grammatical form, and to sneer and chuckle when he goes home at what damned fools all the other members are--and may grow into something very important after a sufficient number of years."

Letter to Oliver Wendell Holmes, Jr., 1868

An organizational meeting was held on December 18 to discuss goals, format, and membership of a student-faculty group sharing an interest in mind-body interaction. The relationship of the Willam James Seminar to the other eponymic medical school Societies, the Behavioral Science Concentration Area and the faculty was outlined.

The "1982" group quickly decided to follow the general path set by its "1981" cohorts: self-determined membership, monthly meetings, and rotating responsibility for both topic choice and meeting host responsibilities. Alan Green has agreed to serve as faculty coordinator and Jeff Saver as student coordinator for the new group.

John Triedman asked if one goal of the group was to acknowledge and explore certain "fringe" zones of subjective experience not commonly honored by medical science. The example of William James' Varieties of Religious Experience was recommended to the membership by way of affirmation.

The group agreed to emphasize a discussion rather than a monologue mode. Scott Solomon promptly moved to challenge the conviction of both Steve Stelovich and Allan Hobson regarding their respective explanations of psychological phenomena. Each reaffirmed his own position and supported that of the other. Both recognize and attempt to deal with mind as well as body. Some examples from the recent medical school Psychiatry 700A course were reviewed to make this point.

We then found ourselves comparing "fringe" experiences and a lively discussion ensued in which the importance of an open, inclusive mind-set was repeatedly emphasized. The difficulties of respecting both sides of the mind-body question appeared to warrant the group's continued attention and it was decided to meet again at 7:00 PM on Wednesday, January 19, 1983 at Terry Benacquista's apartment. A recently published essay, "The Worst Kind of Melancholy," will be circulated as a springboard to discussion.



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January 19, 1983

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# THE MELANCHOLY OF WILLIAM JAMES

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Chapter 2

The Melancholy of William James

(Reprinted from The Ragged Edge)

Meeting of 19 January 1983

Host: Teresa Benacquista

Correspondent: Jeffrey Saver

"Whilst in this state of philosophic pessimism and general depression of spirits about my prospects . . . suddenly there fell upon me without any warning . . . a horrible fear of my own existence. Simultaneously there arose in my mind the image of an epileptic patient whom I had seen in the asylum . . . with his knees drawn up against his chin, and the coarse gray undershirt, which was his only garment, drawn over them inclosing his entire figure. . . . That shape am I, I felt, potentially. Nothing that I possess can defend me against that fate, if the hour for it should strike for me as it struck for him. . . . [I]t was as if something hitherto solid within my breast gave way entirely, and I became a mass of quivering fear. After this the universe was changed for me altogether. . . . [T]he experience has made me sympathetic with the morbid feelings of others ever since."

The Varieties of Religious Experience, 1902  
(Attributed in text to an "anonymous  
correspondent," later revealed by James to be  
himself)

The first regular meeting of the William James Seminar--Cohort 1982 was held in Terry Benacquista's generously donated and charmingly appointed apartment at 10 Alton Court, Brookline. Attending the session were Chris Austin, John Ayanian, Terry Benacquista, Anya Hurlbert, Lee Learman, Susan Lester, Linda Leum, Elizabeth Mort, Jennifer Haas, Jeffrey Saver, Val Slayton, Scott Solomon, Linda Starace, Ebbie Stewart, John Triedman, Sarah Feldman, Jed Nuchtern, Allan Green, Robert Goisman, Allan Hobson and Steve Stelovich.

At this our inaugural meeting, seminar members chose to discuss aspects of the life of William James, the influential turn of the century American psychologist-philosopher in whose honor the seminar has been named. In particular, the group turned to issues raised in "'The Worst Kind of Melancholy': William James in 1869," by J.W. Anderson. The essay portrays the six-year "spiritual crisis" James suffered in his late 20's, a period embracing the years James spent as a student at Harvard Medical School. James' emotional distress arose from a variety of sources, including his doubts concerning his choice of a vocation, conflicting expectations for him held by his mother and father, and a philosophical dilemma he perceived in the irreconcilability of moral freedom with scientific determinism. James' long depression was marked by an inability to work, a recurring fear of venturing away from home and numerous physical complaints. However, this time of melancholy was a crucial formative period in James' life, as he himself would later note. James' own experience of mental turmoil in these years gave him a more sensitive understanding of the phenomenology of normal and abnormal mental states in others and also revealed to him the profundity of "the melancholy view of life." These insights were characteristic marks of his later contributions to psychology and philosophy, respectively. In analyzing this critical era in James' life Anderson emphasizes the psychological aspects of James' depression, explicitly bringing to bear recent writings by psychoanalytical theorists on the consolidation of the self.

The essay turned out to provide fertile ground for discussion, provoking an animated, wide-ranging 3 hour exchange among group members. We discussed such topics as the contemporaneity of James' personal concerns and experience, the possibility that James' melancholy had a physiological component, philosophical and societal aspects of James' depression, the effect Harvard Medical School past and present exerts upon its students, and group members' own experience with emotional distress, mood-altering drugs and illness.

The student contingent of the group began the discussion by emphasizing the relevancy of James' quest over one hundred years ago for self-identity and a vocation to the post-college concerns of our peers and ourselves. John Triedman found that James' self-questioning about a medical career had resonated with his

own experience before choosing to attend medical school and asked how many others had shared this feeling. Paul Unger pointed out that uncertainty over career choices was not just a medical school phenomena, but one widely shared by many of his friends in various fields of endeavor.

Steve Stelovich then moved the discussion in a new direction by making the provocative claim that he would have put James on tricyclic antidepressants. After all, despite the similarities between the concerns that confused James and those that perplex today's students, how many modern individuals spend months confined to bed and years lost in melancholy? James displayed many of the vegetative signs of depression viewed today as indicating pharmacological treatment. If drugs could have freed James from his years of ennui, he might have had ten more great ideas in addition to those he later expressed. Steve, noting that to some extent he was playing devil's advocate, maintained this position throughout the evening, and it served to precipitate a lively discussion of the biopsychosocial aspects of James' illness and of mental phenomena in general.

Allan Hobson noted in response that James' experience of depression made an indelible mark upon his world-view; this youthful period of turmoil served as a rich source of insight and empathy for the mature James. Asked by Ebbie Stewart how James eventually succeeded in resolving his crisis, Allan pointed to James' journey to the Amazon with Agassiz and his years of painting at Newport as palliative opportunities to escape the social context in which he had been paralyzed. Ultimately James returned to Harvard as a lecturer in physiology (later psychology and philosophy) and discovered he was a superb teacher. He went on to a productive academic career which included authoring such works as the Principles of Psychology, a landmark synthesis of phenomenology and neurology. Allan wondered if part of James' success as a teacher and psychologist-philosopher was due to the fact that he recovered from his melancholia on his own without resort to drugs.

Jeffrey Saver added that James' recovery had a philosophical aspect as well, and opined that Anderson's essay underestimated the contribution that James' preoccupation with philosophical concerns, especially determinism, had made to his depression. Jeff noted that one important turning point in James' illness was a philosophical breakthrough recorded in James' writings by the entry, "My first act of free will shall be to believe in free will."

Steve Stelovich acknowledged the psychological and philosophical components of James' despondency but observed that these personality traits and intellectual concerns were unchanging features of James' life. At different times James employed these building blocks differently. When he was dejected, he was unable to reconcile them and felt frustrated at every turn. Later he took the same blocks and shaped a successful, enjoyable and accomplished life. Underlying these contrasting outcomes, Steve implied, was a critical physiological component to James' illness.

John Triedman wondered whether the discussion wasn't coming perilously close to reducing James' philosophy to James' physiology (an explosive suggestion to make in a "mind-body" seminar). Steve Stelovich said, however, that his point was simply that biological changes could affect outcomes at higher levels of organization, not that physiology could wholly account for James' thought. He recalled that when he was attending HMS, students performed a pharmacology

experiment in which they injected unknowns into their lab partners. Upon receiving his injection, he felt feverish, paranoid, desperate. Only after a lapse of time did the realization strike him: "Good God, I've been given epinephrine."

Jeffrey Saver then said that as the group had already considered the physiological, psychological and philosophical aspects of James' dejection, he wished to introduce into the discussion one more level of complication--the societal. In his own day, James' received a diagnosis of "neurasthenia" and the "neurasthenic" was a widely accepted sick role in 19th century culture. Perhaps those undergoing transient "identity crises" in modern society would have experienced James' more prolonged disconsolateness had they lived a century ago. The critical variable might not be biology, but culture. For the benefit of seminar members not expert in the jargon of 19th century medicine, Allan Hobson explained that the descriptive term "neurasthenia"--literally, "weakness of the will"--was applied in James' time to individuals who were chronically unable to rouse themselves to activity. Famous neurasthenics included Alice James (William's sister), Boston's own Mary Baker Eddy and, as Alan Green pointed out, another medical school dropout--Charles Darwin. Jed Nuchtern noted that neurasthenia may indeed have a contemporary counterpart in the phenomena of "taking years off" from school.

Robert Goisman pointed out another societal consideration in the case of William James: class. Very few people past or present can afford to be sick in his grand manner; most simply don't have that luxury. Compare traveling down the Amazon with sleeping in the Pine Street Inn, Boston's home for street people. Money, ethnicity and support systems all shaped the course James' melancholy followed. John Triedman noted that whereas the less well off have vocations and challenges readily supplied to them by their desire to improve their social and/or financial position, the rich must create their own, different kind of ladder. Allan Hobson said that one feature he has observed in his rich patients is how impoverished they feel with respect to options. Scott Solomon asked if wealthier people have a higher incidence of mental disease than those less wealthy and Allan responded that epidemiologically, in categories of major mental illness, the answer was no. Nonetheless, he was intrigued by the very real paradoxes of privilege.

Sarah Feldman said in some instances it would be better to emphasize not wealth, but expectations. In James' case, the difficulty was not financial but intellectual capital. His father was a widely respected theologian and his brother a famous American novelist. James was under great pressure to match their brilliance. We at HMS probably share similarly high expectations for ourselves.

Another student said he supported Dr. Stelovich's emphasis on the physiological underpinnings of James' conscious experiences. He himself had gone through a period in his life when he was very concerned with philosophical questions, in a manner he can't recapture now in his healthy state. He feels that physiological events could well have played an important role in his experience. Steve Stelovich recalled an anecdote about William James which showed that on another occasion he had a clearly biologically-based experience. He experimented with taking nitrous oxide and under the influence of that agent believed he had discovered the meaning of the universe, which he had the presence of mind to write down. After the nitrous oxide wore off, he looked at what he had written and found something like, "The universe is pervaded by the strong smell of benzene." In this instance, Steve asked, did the physiology cause the psychology, the psychology the physiology, or were they different aspects of one event.

Allan Hobson observed that while we all say the interaction between physiology and psychology is reciprocal, people still have more trouble believing in the arrow that runs from psychological events to physiological ones than in that from physiology to psychology. He thanked the student who had shared his traumatic own experience with the group and noted one of the central lessons to be learned from James is that we should pay attention to our own stories as avenues to discovery. He then related an organically influenced mental experience of his own. After being in a car accident in France he discovered he had difficulty forming recent memories and had lost the ability to speak French. He said he had never known anything as anguishing in his life.

Another revealed that she too had had experience with psychologically influenced alterations in mental processes, albeit of a different aetiology. She once ingested recreational mushrooms while hiking at Big Sur with an old boyfriend. At the time, she became somewhat paranoid and noticed that the clouds sped up. Steve Stelovich related a grass-induced episode he had had involving a "primitive Freudian experience": he flushed a toilet and realized it was speaking to him, thanking him. At that moment he saw that bathrooms actually were living beings. Steve said that this anthropomorphizing hallucination helped him to understand better the nature of the psychoses his patients display and the seeming reality that altered perceptions of the world can acquire.

Alan Green then provided a different personal perspective on the biopsychological aspects of mental events by discussing his recent experience living through a 6½ year chronic viral illness. His malady prevented him from carrying on fully with his professional work and freed him from the set patterns of his life. During this time, despite his weakness, he began such new pursuits as starting a journal and writing a novel. He felt that his outlook on life had been deeply influenced by the experiences he had in the course of his long illness, much as had that of James.

A student then related a relevant experience of his own which highlighted the important distinction between voluntarily and involuntarily induced altered mental states. When he was 14 he unwittingly drank punch that had been laced with LSD and had frightening hallucinations which he had no reason to believe were drug-induced and therefore discountable. One result of this traumatic encounter was that he strongly avoided drugs thereafter, "even aspirin," for he never wanted to lose control over his experience again. On the other hand, another student said she had had a larger, more voluntary experience with drugs and that she felt it was difficult to imagine anyone prescribing drugs who didn't feel comfortable taking them him or herself.

Jeffrey Saver then said that in the wake of these stories of group members' encounters with mood-altering drugs, he felt he should reveal the experiential bias behind his emphasis on the philosophical and psychological, rather than physiological, aspects of James' melancholy. Jeff had himself gone through a time of dark feeling during which longstanding philosophical concerns with determinism and purpose took on an emotional importance and urgency they had never before held for him. One precipitating cause of this time of questioning was a need to make decisions concerning a vocation. He said that at the time he was indeed aware of similarities between his and James' experience through James' writings and employed James' thought as one way to conceptualize his own insights.

Linda Leum, in contrast, related an event she suspected might have had a decisive physiological component, but one that differed sharply from those already told. When she sailed alone across the Pacific ocean, she felt unusual sorts of emotions, but of joy, not fear or depression. At one point she felt she wished to jump overboard though she didn't feel suicidal; rather, this impulse, which fortunately she did not follow, seemed to grow out of a deep sense of unity with her surroundings. Steve Stelovich speculated that Linda might have been experiencing the physiology of a depressive episode but that since she was strong, egotonic and intelligent it manifested itself as an extraordinary, positive experience.

Robert Goisman observed that prescribing drugs and thereby altering a patient's mood and thought-processes inevitably involved the physician in a value judgement about the quality and desirability of different mental states. Agreeing, John Triedman noted that physicians may overlook the intrinsic value of slipping away from the normal, rational way of looking at the world.

To illustrate the thorniness of such ethical questions, Steve Stelovich related the story of a patient of a friend of his. The patient was treated for depression against his will and responded very well to drug therapy. He is now glad his therapist intervened, but nonetheless wishes it understood that even now he feels he should have been allowed to kill himself. Allan Hobson told of one of his patients who was periodically depressed and suicidal. He encouraged the patient when well to write letters to herself so that when she became depressed again she might be reminded of how things looked at other times. The technique was lifesaving. Paul Unger recalled a similar story told in a film concerning a severe burns patient forced to undergo an excruciating, yet successful, treatment. The patient maintained even after recovery that he should have been allowed to die.

Susan Lester noted that physicians may impose their values upon their patients in the course of treatment, forcing patients to conform to the doctor's notion of "the good" and failing to recognize potentially positive aspects of "the bad." Allan Hobson agreed, saying that a physician can't pretend to be neutral, but can only do as he feels right, give expression to his values and, if the patient differs, assist him in finding a more congenially-inclined physician. Terry Benacquista asked Alan Green if, had a wonder drug become available during the time of his illness would he have taken it. Allan replied that as a matter of fact transfer factor had seemed to be just such a drug and its availability raised profound philosophical and personal questions for him. Eventually, however, his doctors ruled out transfer factor on physiological grounds alone.

With this discussion raising, but certainly not solving, the peculiar ethical dilemmas altered mental states pose for the physician-patient relationship, the meeting drew to a close. The group had talked about a great number of fascinating and important issues but I think Allan Hobson was right when he earlier described what he felt was "the bottom line" of this first regular meeting of the William James Seminar. Subjective experiences, our own and that of our patients, are as valid as sources of information and insight as objective observations. This was the message of William James and the moral of tonight's discussion. We become better physicians when we recognize the great variety of life experiences. We too easily distance ourselves from mental illness by thinking of it as something that only happens to others, outside the range of our own experience, when actually all the elements of our patients' experiences lie within ourselves as well.

To paraphrase William James' own remark after taking his students on a visit to an insane asylum, "Harvard Medical students would not like to admit that no sharp line could be drawn between themselves and the men we have just seen, but it is true."

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February 16, 1983

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# HYPNOSIS AND THE ABYSSES OF OUR NATURE

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**Chapter 3**  
**Hypnosis and the Abysses of our Nature**  
(Reprinted from The Ragged Edge)  
Meeting of 16 February 1983

Presenter: Steve Stelovich  
Host: Steve Stelovich  
Correspondent: Jeffrey Saver

"It is a familiar fact that certain subjects, when told during a trance to perform an act or experience a hallucination after waking, will when the time comes, obey the command. But how is the command registered? How is its performance so accurately timed? . . . A self presides over them, a split-off, limited and buried, but yet a fully conscious self. More than this, the buried self often comes to the surface and drives out the other self whilst the acts are performing. . . . All these facts, taken together, form unquestionably the beginning of an inquiry which is destined to throw a new light into the very abysses of our nature."

The Principles of Psychology, 1890

"What a powerful work of miracles is the human imagination!" With these words, H. Bernheim began his essay of 1900, "Suggestive Therapeutics," which was one of two background readings for tonight's Assembly meeting on that most tantalizing of psychological phenomena: hypnosis. In his article, Bernheim proceeded to present a persuasive argument for his view that such diverse historical movements and procedures as the "talismans and amulets" of the ancients and middle ages, the animal magnetism of Mesmer, metallo-therapeutics, faith cures and early medical hypnotism all shared a common underlying therapeutic mechanism - the mechanism of suggestion. Bernheim endorsed the position of his contemporary M. Liebeault, a French physician, who viewed hypnotism as a technique that induced the patient's mind to enter a dreamlike state in which its suggestibility was artificially increased. When a physician suggested to a patient in this state that his or her symptoms had disappeared, a cure was often effected.

The second reading, from "Medical Hypnosis" by Lewis Wolberg, reviewed the early history of hypnotism, including its Greek and Asian origins, historical figures such as Mesmer, Braid, Liebeault and Bernheim, and its more recent fortunes. Wolberg noted that with Breur's celebrated treatment of Anna O. in 1880, therapeutic applications of hypnotism took a new turn, away from the direct removal of manifest disabilities, to the revelation and treatment of the traumatic memories that were the hidden causes of these symptoms. Freud pushed this "suggestive" discovery in new directions, however, which soon left hypnotism behind. He developed in the interpretation of a patient's free associations, dreams and transference fantasies a number of new methods for investigating traumatic episodes and hidden mental processes. Even more influentially, he provided a theoretical approach for deducing the structures of the conscious and unconscious mind from the resistances, defenses, and latent motives revealed by these new methods. Discounted by Freud and the psychoanalytic movement as relatively ineffective, hypnosis fell into disuse. However, successes in treating WWI cases of war trauma through hypnotic recall of the precipitating traumatic experiences created a new enthusiasm for hypnotherapy.

One intriguing technique newly introduced in Wolberg's day was that of "experimental conflict." Patients might be placed under hypnosis and related a fictitious event involving emotional pain or dilemmas. Upon awakening, they exhibited a wide range of classical psychoanalytic symptoms, including stammering, blocking, repetition of ideas and complaints of physical illness, which often disappeared when they were rehypnotized and helped to consciously recall the subconsciously implanted fictitious memories. Wolberg ended his chapter by saying, "The history of hypnosis demonstrates conclusively that it is no miracle worker, but that, shorn of extravagant claims made for it by some of its adherents, it is an important and useful therapeutic tool."

The group began discussion by comparing and contrasting hypnosis with other forms of suggestion, including belief in special cures like Laetrile and cures motivated by religious faith. Was there something about the hypnotic state that enabled psychological processes to more easily influence somatic processes? One student thought so, arguing that with hypnosis one circumvents skepticism. The patient doesn't judge rationally what the hypnotist says; rather, suggestions enter directly into his or her belief system. He went on to remark that the reading by Wolberg had seemed to give a remarkably balanced view of the phenomenon of hypnotism and asked Steve Stelovich if similar reasonableness prevailed in the profession today.

Steve replied that hypnosis had again disappeared into the intellectual wilderness for a time after the period in which Wolberg's essay appeared, but then returned. He noted that to say hypnosis is a form of suggestion is correct as far as it goes, but that to say only that amounts to merely substituting one label for another, without genuinely explaining the underlying phenomenon. If someone can suggest that another's right arm become stiff, and it becomes stiff, something very unusual is going on. Steve also said he thought hypnosis was not a royal road around a person's personality but, rather, its dynamics should be viewed in the context of an individual's particular character.

For example, he once hypnotized a cousin who, it turned out, was actually terrified of hypnotism. Steve tried conventional inductive approaches a number of times without success and then attempted Milton Erikson's "confusional technique." This procedure requires that the hypnotist initially behave outlandishly and seek to confuse and overwhelm the subject, e.g. "concentrate on your right arm, it is feeling light, your left arm seems heavy, your legs are growing colder, your right arm is hot..." When the subject is finally instructed to relax and let himself go, the hitherto resistant person accepts - that's the only reasonable thing to do. Once his cousin so relaxed, Steve told him he couldn't open his eyes, and then told him to try. When he was unable to open them directly, the cousin started moving his hand up to his face as if to force them open, thinking, "Oh (expletive deleted), I'm in over my head." Steve woke him up and said, "You were afraid." cousin replied that yes, he was afraid. He knew that if he could just laugh, he could debunk it, but he couldn't open his mouth either. In this instance, Steve pointed out, he hadn't snuck around the subject's personality - the

subject still sought to debunk hypnotism even during his trance. He suspected that when a stage hypnotist says, "Sleep!" and his subjects drop right off, he must have initially chosen volunteers who could easily let themselves go and not, for example, Harvard medical students.

The same point concerning the interplay between hypnotic suggestion and individual personality, Steve remarked, could be seen in incidents of group hypnosis. When several people are given the same suggestion, they react differently, individually. In a fall demonstration in the Venderbilt Hall dormitories the suggestion he gave to medical student subjects (who are apparently indeed capable of "letting themselves go") was that they would be unable to leave their chairs upon awakening. One student, a member of the seminar group, stood up fine... and stood beside his chair for 1/2 hour. He was both in control and out, had left his chair and hadn't. Another student couldn't get up - she felt the chair was so comfortable. Then she had a moment of realization, "Oh, it's the hypnosis" ...and she still remained seated.

The student who had stood by his chair was a seminar member and so could provide the group with an account of his internal experiences as a subject perhaps or perhaps not in a "trance." He said he refrained from sitting again because he didn't want it to seem as though the suggestion had affected him; nevertheless, he admitted, he hadn't crossed the room away from the chair on his own. Steve noted that one fascinating aspect of this and other subject reports was that even when the subjects consciously remember the suggestion that was implanted in them, it affects their action. At a different demonstration of hypnosis Steve had conducted, he had given another seminar member, Liz Mort, the suggestion that she leave the room when he uttered a particular sentence. Liz reported she remembered the suggestion upon awakening, but still felt she had to leave the room. When Steve said the key sentence, "The question is, what really happened?" his face seemed to her to expand and acquire an increasingly menacing look, and she bolted from the room.

Steve noted that a good psychotherapist does hypnotism whether he or she realizes it or not. He keys into the patient's particular "psychoneuro development", matching the patient's patterns of imagery and language and, when it succeeds, the world changes. That's a kind of hypnotism.

Bob Goisman was reminded of Milton Erikson's technique of attempting to match the patient's preferred sensory modalities in therapy conversations in order to establish a closer link with him or her. This technique also appears in advertising, where studies have shown that the best salespeople are those most adept at matching the sensory imagery of their clients. Here was another example of the classic scientific dilemma of a powerful discovery being applied in pursuit of questionable goals.

Steve then told the group a little more about Milton Erikson, a "strange man". He spent a good share of his life in Arizona where, though paralyzed, he would dress in a purple gown and greet the patients who travelled to be under his care. He became quite famous for modeling psychopathology using hypnosis. Erikson once, for example, instructed a subject under hypnosis that he both very much enjoyed cigarette smoking and wished to stop smoking. Upon awakening and being offered a cigarette, the subject accepted it and proceeded to go through a bizarre sequence of finding and misplacing again both the cigarette and matches with which to light it.

The male seminar member who Steve had hypnotized reported that he felt at the time that he was thinking too intently about what was taking place for the right effect to take hold. Steve noted that many people, along with Woody Allen, consider their brain their second favorite organ, and pay it due attention. He felt that the phenomenological experience of hypnosis might be different for a highly self-conscious subject, but that such individuals could still be deeply hypnotized.

Liz had a question for everyone who had been a subject of hypnosis: had they ever had any other experiences in life akin to the sensation of dissociation in hypnosis? One student replied that on one occasion after she had been hypnotized she had the opportunity to try a friend's isolation tank, and there had a similar experience. She explained to the members of the group who were not cognoscenti of California culture that an isolation tank is an apparatus designed to deprive its occupant of normal levels of sensory input; inside it, one is in sound-proofed darkness, floating in water warmed to body temperature. (Isolation tanks played a key role in the Harvard Medical School cinematic epic, "Altered States"). Inside the tank, she was uncomfortable at first, feeling as if she were inside a coffin. But she quickly grew accustomed to just "being there." Though she remained inside the tank for half an hour, she had no sensation that time was passing.

Alan Green, who in addition to his work as an HMS psychiatry professor has written novels, said he feels a sensation that is similar psychically, if not physically, to being hypnotized when he writes fiction. When he faces a blank page, he lets his mind go and ideas well up from within; his awareness of external stimuli fades. And again, he feels a similar sensation in doing psychotherapy. Sometimes an extraordinary moment can occur in the course of a session and time disappears.

One seminar member who had once participated in a hypnosis demonstration said that before the session he had decided that he wanted to become hypnotized. In the hypnosis demonstration, he purposefully sat in the front row and thought, "I'll do exactly as Steve says, and he'll pick me as a subject. He had seen a demonstration of hypnosis in high school in which the subjects were directed to perform rather unusual acts, such as eating lemons, and he

was intrigued. However, when he himself was hypnotized in class he felt very uncomfortable, and at the finish had a strong sense of *deja vu*. He felt hurt, angry and wished to cry. Only much later did he realize that the cause of his feelings of unease lay in the similarity of his hypnotic experience to that he had had in an intense psychotherapeutic relationship. Moreover, finishing the hypnosis demonstration reminded him of the traumatic end of his psychotherapy.

Steve had conducted the group hypnosis in which this seminar member participated, and he recalled that of the four students who had served as subjects, this student alone concerned him at its conclusion. At the time he was worried that the student might have missed the substance of the lecture Steve was giving for he sensed that the student's recall of the events taking place in class that day may have been disturbed by his experience as a hypnotic subject. So, Steve noted, both of them felt they had in some way participated in an unfinished personal relationship.

The student responded that he had indeed had trouble absorbing the lecture. He wished to emphasize that hypnosis is a way of reaching the unconscious, like psychotherapy, and other phenomena. Noting that he had given a lot of thought to the subject as a result of his distressful experience, he mentioned three other occasions in his life he felt shared features with his hypnosis: 1) when he was learning to meditate, 2) when he experienced the letting go of making love, and 3) when he listened to a trance tape that had been given to him by a friend who was a student of Milton Erikson.

Another student who had been hypnotized said he experienced similar thought processes when on the verge of falling asleep, in dreams and nightmares.

Val Slayton asked if anyone has ever performed EEG's on people who were being hypnotized to see if there was an electrophysiological correspondence between sleep and hypnotism. Steve replied that work had been done, at the Brigham and Women's Hospital and elsewhere, but that so far no pattern had turned up that significantly distinguished hypnotic states.

Chris Austin said that he finds hypnotism fascinating because with it one can reach not only the usually accessible parts of a person's mind, but also one can affect bodily processes usually thought not to be under the control of the brain, e.g. blood flow to a particular area of the skin, or the immune response. A study is now under way at the Brigham, he said, looking to see if hypnosis can affect the rates of transplant rejections. Sarah Feldman pointed out that such effects can occur without hypnosis. For example, a member of our class who found neuroanatomy intolerable became violently, physiologically sick on the day of the final exam. Paul agreed that those pathways exist and noted that hypnosis might offer a way of controlling them, rather than allowing them to control us. Bob Goisman concurred, saying that it was a matter of semantics whether or not you label a process "hypnotism." He recalled being hypnotized when he was in medical

school and being unable to bring his raised arm down until told. He felt as though his ability to concentrate on anything but his arm had been blanked out, and thought such a skill could be developed, allowing anyone to use their powers of concentration in a similar fashion.

Dan Barboriak asked if there was any scientific way to distinguish hypnotism from suggestion. Steve responded that scientific investigations in this area would be much more difficult than one might initially think. Consider, how would you measure whether or not a suggestion had been carried out? For example, suppose you gave the suggestion that the subject remain in her or his chair. If the subject gets up, but sneaks back at 3:00 A.M., would that count? What if she or he got up and didn't return to the chair...for four years? The peculiar nature of reaction formation makes it difficult, perhaps impossible, to approach suggestion in a traditional scientific manner. Jeffrey Sauer said that it was just this difficulty that made him feel hypnotism was an exciting and important subject for a mind-body seminar. The phenomenon of the hypnotic subject "unconsciously" transforming the hypnotist's linguistic, symbolic input into physiological acts neatly and simply illustrates the central difficulty for a science of mind; how to describe the non-linear, non-graphable interaction between events occurring on the level of symbol and meaning and processes taking place on the level of physical cause and effect? Steve replied that what psychiatry requires is a different form of science.

Dan was reminded of the traditional philosophical problem of whether other minds exist. He said he believed so as a matter of policy, but it was not a verifiable, scientific claim. Paul Unger noted that if you imagined that nothing occurred without your being aware of it, no one could convince you otherwise. If you convinced yourself of that, it would be a revolution. Jeff was reminded of a humorous story about Bertrand Russell told about just such a lady. She claimed to sincerely subscribe to the philosophical position that oneself alone exists, and wrote to him to say, "I can't understand why more people aren't solipsists!" Shelly Greenfield pointed out, however, that while we may jest and momentarily imagine what it would be like to hold such bizarre notions, psychiatrists do treat and see psychotic patients who are permanently in such a state. Sarah noted that this fact constituted a compelling argument for the existence of other minds. If the world were peopled only by normal individuals one might be justified in concluding there were no other minds than one's own, but when one comes across psychotics with notions so bizarre they couldn't have come from one's own mind, one must admit that other minds exist. Another student member agreed, and added that a personal experience he had made it abundantly clear to him just how extraordinary another's mind might be. He and his uncle were held at knife-point one weekend by a family friend who had suddenly begun acting crazily. They were freed only when his aunt, a psychiatrist, returned and demanded the friend give her the knife, which he did.

A number of people then noted that the existence of others who make discoveries and think thoughts that never would have occurred to one - the mere existence of books - is enough to prove other minds exist, let alone the bizarre thoughts of psychotics. Jeff replied, however, that such arguments merely highlighted seminar members' reluctance to believe in the unconscious. If one truly put stock in the notion that an unconscious, with its own drives and thoughts, existed, then one could easily postulate one's own unconscious as the source of the unfamiliar, brilliant and/or absurd thoughts that one seemed to encounter for the first time only in other people.

Dan, who had first raised the problem of other minds, went a step further, saying that such arguments may actually backfire. We usually base arguments for the existence of other minds on an analogy with our own, the only one that is accessible to us. However, if we come across behavior that is truly bizarre, that we would never engage in, then the analogy has broken down, and we should stop postulating a mind responsible for it and think in terms of mechanism.

The discussion briefly ascended to even higher planes of abstraction and then Anya Hurlbert remarked that arguments never really take place in philosophy, because metaphysical opponents argue from within incommensurable paradigms of thought. Either people begin with the same assumptions and agree, or with different assumptions and don't. Bob Goisman noted that such an interaction takes place when a psychoanalyst and a behaviorist meet. They see the same clinical problem but address it in completely different languages. Modern behaviorism has its origins in the work of B.F. Skinner and his declaration that there is no need to postulate an unconscious to explain behavior. Unfortunately, because Harvard Medical School is so psychoanalytically-oriented, we often aren't exposed to this balancing point of view. Sarah asked how one could explain hypnosis without resorting to an unconscious and Bob replied, "not very well." A behaviorist might invoke such notions as role-playing and imitative behavior in the hypnotist-subject interaction.

Steve pointed out that psychoanalytic explanations of hypnosis were equally suspect. A psychoanalyst once explained to him that transference, with the hypnotist assuming the role of the psychoanalytic therapist, was the key to explaining hypnosis. Very well, he replied, but why don't people on the street fall down when I walk by for the same reason?

Teresa Benacquista asked if hypnotism was of any benefit in the treatment of schizophrenics and psychotics who usually held very different perspectives on events than the psychiatrist. Steve responded that while psychotics are difficult to hypnotize, it does often help to communicate with schizophrenic patients from their perspective. He once had a woman patient who would act like a child in sessions, saying she wanted to climb in his lap and like things. But when he once responded equally crazily, as a child himself, she immediately said, "That's crazy, what are you talking about?"

Bob said that John Rosen, a psychiatrist in the 1940's in New York, systematically attempted to talk with schizophrenics from their point of view. For example, a patient might say the FBI is after me and he would respond, "Yes, I'm J. Edgar Hoover and I love you." Such approaches were often successful, even by such external measures as success in quantitatively reducing the levels of life-threatening fevers of catatonic schizophrenics.

Steve recalled a time when the staff on a unit he was directing asked that an unruly, uncooperative patient be transferred to a prison facility. He wished to first see the patient who therefore was scheduled to be presented at a conference, despite the staff's objections. The patient came in and said things utterly devoid of sense. The faculty member decided to ride along with the patient's verbal style and replied also in gibberish. That made the patient sit up, and the faculty member pressed on, saying, "I can do it as well as you, but we don't have the time." The patient replied, "You can say that. You're a fancy doctor and can walk out of here while I have to stay." The faculty member said, You're damn right, and if you don't shape up, I'll have to send you away. For all I know, you could be in my place. I really am here to help you. What can I do, do you want me to dance on a table?" As soon as he said that, the faculty member went on, he knew it was a mistake. Red with rage the patient said yes. He replied that if the patient would be willing to talk, he'd be willing to try. The patient said, "You first." So he did a little dance on the table to the surprise of the gathered staff. When he finished he told the patient it was his turn. The patient said, "I can't live up to people's expectations." The faculty member replied, "Oh, come on, what are you talking about." And then the patient seemed to just give up his psychosis and told his story for the first time. Both his parents had been alcoholics, and his mother drank at home. He was always terrified to come home; sometimes his mother would be passed out and bleeding and he'd have to call an ambulance. One day when he was seven or eight, he decided, that's it - he closed the doors around her, turned on the gas, and went to bed. That night his father chose to come home, and turned off the gas. Nothing was ever said about the incident, but he began to do poorly at school and became progressively worse.

After this confession, no one on the staff wanted to send him to prison. He began to do better, though he continued to suffer from schizophrenia, which is of course a biologically-based illness. He was able to join a halfway home. That encounter, Steve concluded, seemed to him to have been a form of hypnosis, for both the patient and himself.

Shelly said she had discovered something of the power of speaking the same language as a patient when her clinical tutorial group met with a 14-year old girl with a somatic illness. When she first talked to the girl, she spoke as a person, not a doctor, and the girl responded by looking at her, as she had not with the physician. However, Shelly became self-conscious, and as she began to talk in a more doctorly fashion, the girl withdrew again.

The student who had been held captive by a family friend noted that the incident made a similar point. Whereas he and his uncle had tried to be reasonable with the friend, his aunt had come in and proclaimed to the friend, "I am not your mother, I will not take this crap, sit down," and succeeded in breaking through to him where gentle argument had failed.

As the meeting drew to a close, Steve said he would emerge from our discussion with a new insight. He was struck that the reaction of the student who had been hypnotized in his demonstration and his own were so in consonance without ever being spoken about. He now realized that, generally, whenever he carries out what is labelled "hypnosis", he enters into a funny phenomenological state, akin to being self-hypnotized. He has a sense for how a subject will respond by consulting how he himself feels. The same interaction takes place in psychotherapy. We usually think only of the subject who has been hypnotized, but perhaps we should think of hypnotism as a dyadic relationship, with the hypnotist hypnotizing himself as well. In the future he will try to explore with the subjects he hypnotizes what their experiences are like in the days after the event.

(Attending this meeting were Chris Austin, Daniel Barboriak, Teresa Benacquista, Hughes Evans, Sarah Feldman, Bill Fletcher, Shelly Greenfield, Jennifer Haas, Anya Hurlburt, Tal Laor, Elizabeth Mort, Jed Nuchtern, Jeffrey Saver, Val Slayton, Scott Solomon, Linda Starace, Ebbie Stewart, Paul Unger, Alan Green, Robert Goisman and Steve Stelovich).



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March 16, 1983

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# PERCHANCE TO DREAM, OR TO DREAM STATE GENERATE?

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#### Chapter 4

Perchance to Dream, or to Dream State Generate?

(Reprinted from The Ragged Edge)

Meeting of 16 March 1983

Presenter: Chris Austin

Host: Steve Stelovich

Correspondent: Anya Hurlbert

"They (Freud's theories) can't fail to throw light on human nature but I confess he made on me personally the impression of a man obsessed with a fixed idea. I can make nothing in my own case with his dream theories, and obviously 'symbolism' is a most dangerous method."

Letter to Theodore Flournoy, 1909

"[W]e must . . . ask ourselves whether, after all, the ascertainment of a blank, unmediated correspondence, term for term, of the succession of states of consciousness with the succession of total brain-processes, be not the simplest psycho-physic formula, and the last word of a psychology which contents itself with verifiable laws, and seeks only to be clear, and to avoid unsafe hypotheses . . . although this is certainly only a provisional halting-place."

The Principles of Psychology, 1890

Freud's theory of dreams lies at the foundation of psychoanalytic thought, but few realize that it had its origins in Freud's theories of neurophysiology, not psychopathology. Freud's original goal was to make psychology into a "natural science," one that had a verifiable basis in hard biological principles. His training in neurology and neuropathology led him to take the constructs of brain science as building blocks for a science of the mind. He formulated his dream theory at the same time that he wrote his "Project for a Scientific Philosophy," and both depend decisively upon his understanding of the brain as a network of neurons which individually store and release energy supplied by stimuli from outside the nervous system. Freud's conception of neurophysiology has been fundamentally outdated by 80 years of research. Is psychoanalysis still in its thrall, bound to the tenets on which Freud's theories of dreams and the unconscious were based?

In this meeting, the group considered Freud's theory of dreams (as presented in "Revision of the Theory of Dreams," Lecture XXIX of his Lectures in Psychoanalytical Theory) in the light of a modern neurobiological theory, the activation-synthesis hypothesis (as presented in two articles by Allan Hobson and Robert McCarley). What changes in the former are necessitated by the new neurobiological findings? Can the new theory encompass our vast and complex psychological realm as convincingly as Freud's? The group strove to answer such questions while treading the edge of the mind-body problem which Freud pioneered in his synthesis of a new psychology.

Freud defines a dream as a "pathological (albeit harmless) product," motivated entirely by impulses repressed by consciousness. We sleep in order to escape the bombardment of stimuli from the outside world, but leave ourselves open to stimuli from inside the body. These stimuli, (such as "residues" from the day's events) can link up with impulses we normally repress, and, banned from consciousness and physical expression by a night-time censor which seeks to preserve sleep, they must create and find ultimate satisfaction in visual hallucinations. A dream is thus an unconscious "wish," disguised to protect the dreamer from its influence. But the task of the psychoanalyst is to uncover the repressed impulse that caused the dream, by the technique of dream interpretation. He must, according to Freud, strip away the editorial revisions the dreamer's consciousness performs during recall and, most importantly, he must analyze the associations the dreamer makes to the dream-images, for in these associations lies the impulse like "alkali (in its) mother-liquor." The more resistance the dreamer offers in making associations, the closer the analyst is to the conflict between

repressed impulse and repressing consciousness that gave rise to the dream. Freud said that "in every dream an instinctual wish has to be represented as fulfilled," and directed that the "depth psychologist" must root out that wish and confront the dreamer with it.

In their papers, Hobson and McCarley point out that although Freud's idea of demonstrating an isomorphism between physiological and psychological processes is "important and fruitful," his dream theory must radically be altered to conform with our present knowledge of neurophysiology. Contrary to nineteenth century neurophysiology, neurons are not "passive energy reservoirs" which rely on external stimuli for their supply. They are, rather, information transmitters which can be spontaneously active and form self-regulating networks. Dreams in fact are caused not by unconscious impulses but by "motivationally neutral" activation of excitatory cholinergic (generator) neurons in the pontine brain stem, whose activity oscillates reciprocally with that of nearby inhibitory aminergic (level-setting) neurons, creating the sleep-dream cycle. The activation-synthesis hypothesis says that although dreams may contain psychological elements, their origin is purely physiological and their peculiar characteristics can be explained by physiological peculiarities of the dreaming-state: the inhibition of spinal cord neurons, the suppression of sensory input, and the phasic activation of oculomotor and vestibular neurons. Visual images are created by the matching of visual memories with the pontine-generated eye movements, not by thwarted unconscious desires. Is, then, the central importance of dreams to psychoanalysis deserved, their argument would seem to ask?

Chris Austin opened the discussion by summarizing these different dream theories and exhorting the group to bring out their own personal dream experiences to create data in a field where experimentation is just beginning. He pointed out that Freud's notion of neurons as energy reservoirs which were forced to discharge energy when they were overfilled was entirely reasonable, given the anatomical data of the time. On the other hand, he wondered what Freud's statement that internal conflict gives rise to dreams implied about people in a state of bliss. "Do lotus eaters dream?" he asked.

Following Chris' lead, the group began to probe the weak points in Freud's theory, testing them for permanence in the face of the conflicting new data and their sometimes fantastic implications.

Terry Benacquista wondered if the existence of a pontine mechanism for generating sensory signals during dreaming necessarily excludes Freud's interpretation of their meaning. "I do feel there is meaning attached to my dreams!" she exclaimed.

Allan Hobson replied with four important points: 1) Freud himself did not ignore the neurobiology of his time--he transliterated it; 2) dreaming does have psychological concomitants, but contrary to Freud's view, in which the mind has a life of its own, it is a physiological process pre-programmed by the brain; 3) we do not have to give up our feelings about the meaning of dreams, which is an issue separate from their generation, while, 4) we should remember that Freud believed the obscurity of meaning in dreams resulted from conscious defence mechanisms, whereas modern neurobiology shows that it results purely from the obscurity of the

process. The associations a patient makes to his own dream may be no more useful than those to any other bizarre story, he wagered.

"But can't we learn more from something we create ourselves?"  
Sarah Feldman interjected.

Steve Stelovich emphasized that Freud did not discuss simply the making of dreams. Granted, his ideas of the neural mechanism underlying dreaming were wrong. But, more importantly, he introduced the idea of dream interpretation, and here lies the lasting value of his theory, "Let's take my psychological associations to Rorschach inkblots, for example. We could hardly say that my problems in childhood caused Rorschach to press his inkblots a certain way. On the other hand, I could look at any painting, and using Freudian skills of interpretation, by making associations to everything I saw in the picture, bring out my whole life. As Wittgenstein said with reference to the Interpretation of Dreams, "It's a work of genius written by a raving lunatic."

Allan Hobson commented that the Rorschach example itself illuminated the unspecific and unscientific aspects of Freud's theory. Although there is no way to prove that the bizarreness of dreams results from an imperfect synthesis of spontaneous nervous impulses rather than from a distortion of repressed psychological impulses, he said, the dream theory needs to be revised in concordance with modern neurobiology.

Jeff Saver pointed out that, conversely, Freud's theory would be saved if one could construct a scientific test that did distinguish Freud's "utterances of value" from a Rorschach test. He also noted that Freud himself seemed tantalizingly close to an incipient synthesis when he said, "On the one hand, a dream may be . . . a sign that some areas (of the brain), under the influence of unknown stimuli, endeavor to go on working, but were only able to do so in a very incomplete fashion." But Freud went on to dismiss this idea, and Bob Goisman pointed out that Freud anyway would mean external, not internal, stimuli. Allan Hobson emphasized that Sherrington, Pavlov, and Freud all believed that the nervous system actually stopped during sleep, and that people normally operated on reflex systems, which simply copied the external world. "Today, to understand dreams, we need to understand open-loop generators, not copiers," he concluded.

But Steve Stelovich argued that Freud's dismissal of the "incipient synthesis hypothesis" must be looked at historically. Freud was forced to challenge popular theories of his time, which said, for example, that dreams are only distortions of somatic processes, such as stomach upsets!

In vehement protest, and with all due respect, Allan Hobson called Freud a "polemical rascal" who quoted earlier dream scientists out of context simply in order to dismiss them. Bob Goisman noted that, also, historically, dreams have been better understood than Freud reported, and have played integral roles in some cultures, notably the ancient Greek.

In defense of Freud, Jeff Saver said that in the Interpretation of Dreams, Freud had emphasized the importance the lay public attached to dreams, yet had wished to propose a new approach in order to further plumb their meaning.

Having challenged Freud, the group now faced the problem of how to preserve the parts of his theory which instinctively felt right, and yet to get a grasp on the finer details of the neurobiological theory, ultimately in order to reconcile the two. Several questions were directed to Allan Hobson in order to clarify the problem.

"Could REM sleep simply be a neuronal mechanism that evolved to solve the conflicts we all know we have?" asked Chris Austin.

"That gets us into deeper water," replied Allan Hobson. "If so, then we'd need to show that after dreaming, one's conflict level goes down. Could we show that the dreams of the analyzed have less conflict than the non-analyzed?"

"Yet we do recognize when we are dreaming about conflicts, whether we do it directly or in symbols. How does one explain that? And where exactly in the brain does the information in dreams originate?" asked Shelly Greenfield.

Hobson replied, "It's true that conflicts may be the major, or exclusive, contributor to the content of dreams, but do dreams exist in order to solve conflicts? My own recurrent dreams do focus on conflicts, but they don't seem to solve them or even reduce the tension surrounding them." In response to Shelly's second query, he reiterated that although memories are used in dreams, much of their content is created de novo and so it is "in the nature of the process to create meaning. The logic of the internal world becomes dominant. One must therefore look more closely at the dream-meaning theory."

In response to this dialogue, Steve Stelovich emphasized that dreams in Freud's theory are not simply products of conflict, but also expressions of wish-fulfillment. He also addressed Chris' question by noting that as children become socialized--as Freud's censor becomes active--their dreams change from blunt to complex expressions; yet in his own current dreams, products of a now thoroughly analyzed mind, the elements of his wishes and desires are not as disguised as they used to be.

Jeff Saver then brought up the distinction between repressed versus simply unfinished material in dreams. Would it be possible to explain free associations to dream-images without a theory of conflict and repression? Two faculty members differed in their responses. Hobson said he wouldn't want to try to explain the origins of free associations, as he hadn't any hard data. In his view, he sees little evidence for repression, perhaps because he emphasizes to his patients that dreaming is a natural process, that it's "normally abnormal." Maybe, he ventured, Freud helped us get over repression.

Maybe, Anya Hurlbert countered, it was Freud who caused the repression! Yes, Hobson replied, Freud could be fairly heavy-handed. Even his own "Irma" dream seems pretty far-fetched. "Ahhh," said Stelovich, "but that's because Freud doctored up that Irma dream, just as he did the Anna O. story; there was too much conflictual material in it!"

Steve Stelovich then argued that he does see repression in his practice. "There's a certain phenomenon that occurs: you and a patient can be very puzzled

over something. It takes a great deal of effort to make any headway at all. Then suddenly, there's a revelation: 'My God, that's what's going on!' And to explain this phenomenon, we must use Freud's concept of repression. But we can use his concepts heuristically: his censor might simply be our inability to understand."

But then, Goisman argued, "censor" and "repression" are simply bad choices of words. Perhaps instead of "repression," which sounds evil, we should say "a knotty problem." Agreeing, Stelovich called attention to Bruno Bettelheim's new book, Freud and Man's Soul, in which the author points out that many of Freud's terms have been badly translated into English. For example, Umdrangen, the word translated as "to repress," actually means "to take away from the surface, to lose clarity."

Hobson then noted that some dreams can't be interpreted in any scheme at all, and that perhaps the best one could say about the modern theory is that it's "comfortable with inventiveness." But, he warned, the system is endlessly recombinant: "My own dreams are pure gibberish as often as they are insightful."

"What insight might dreams give us into the creative process in daily life?" asked Scott Solomon, moving the discussion in a new direction. He suggested that the group exploit the dreamer's unique point of view to understand these strange creations. "Let's focus on the dynamic nature of dreaming. It seems as if there ought to be a list of credits at the end of a dream, as if it were a play, movie, story or personal creation. It seems we synthesize meaning for a dream during the dream, and the rest of the dream builds from there. This raises the question of free will: are we free to create our own dreams? Hobson's theory seems to indicate yes. Is it possible that normal thought processes happen in the same way?"

Queried about what he meant when he said dreams were "dynamic," Scott continued, "Each experience in a dream seems to create the next, perhaps by reaching into memory for new material. It's as if the mind were trying to organize and interpret the bizarreness by attributing memories to the events. It seems in life, reason dictates action, whereas in dreams, action dictates reason."

"Your theory sounds voyeuristic," said Sarah Feldman.

"Ah, would you like to hear more about my dreams?" asked Scott.

"Do you think they ought to be movies?" riposted Sarah.

"No, I don't. I'm simply suggesting another way of looking at them."

Bob Goisman seconded this suggestion. "What about a movie theory? Why not? It could be an entirely new combination of neuronal firing that occurs during dreams. Not in Freud's theory, though; there, new combinations would be impossible." Anya Hurlbert recalled the case of the chemist who discovered the structure of the benzene ring by dreaming of a snake biting its tail. She also noted that authors have sometimes hit upon plot devices in their sleep.

Scott could speak to this point from personal experience: Sometimes I do things while playing jazz piano that I can't believe later. I seem to go beyond my

technical limits. Dreams take me by surprise in the same way, but I don't think they arise out-of-the-blue, with no help from the creativity of the author."

Bob Goisman protested that no one had claimed that dreams are independent of one's own mind, and Anya reemphasized, "Dreams are no more independent creations of the mind than thought processes are. The fact that a mind produces a dream means it has the creativity to invent the dream."

"It's exciting to think that we may have a way of explaining creativity. A neurobiological way," Scott said. "But of course it's probably true that if the chemist hadn't been properly trained, he couldn't have come up with his theory, no matter how inventive his dreams were."

Bob Goisman noted, "There's a psychological test in which the subject is shown a picture of an ordinary item and asked to list as many different uses of the item as possible. It's amazing what innovative ways people come up with! People find forty or fifty ways of using a nail, a pair of shoes. It shows there are new ways of using the mind."

Steve Stelovich then began in a musing way, "You know, for years I thought I couldn't walk and chew gum at the same time, but now I've learned I can. And I'm working on a third: doing a little juggling." But he finished by urging the group to avoid it's "either-or" mindset. "We have the tendency to say dreams are either this or that; well, I have no objection to the neurobiological theory per se, but I think it might be that dreams are both analytic and synthetic. Or they might be five different things all at once! What we ought to look at is the interface between the different ways of understanding dreams."

Val Slayton then illuminated a phenomenological approach to understanding dreams by asking if there were two classes of elements in dreams, those that are novel and those that are hardwired into the system. "For example," he asked, "what about recurring elements such as falling or flying?"

"Let's find out," Steve Stelovich responded dramatically. "What's your flying dream?"

Val answered, "I start off running at a normal pace, then I slow down and gradually rise off the ground. My legs are still moving, but it's very easy to stay aloft. There's just myself in the dream."

"How high do you fly?" Steve Stelovich asked confidently.

"I have two types of dreams: in one I'm above a lake, in the other, I just lift out, as in astral projection."

Steve Stelovich then revealed, "In my dream, I'm standing on the balustrade of the house I lived in as a child. I run and jump off the end, but it takes me four or five tries to get going. I'm usually inland, above trees. If I'm alone, I'm fine; if I'm with other people, I must be careful, I don't know why. If I'm very high, I might fall for hundreds of feet. I'm in freefall, but I can pull out, a waxing and waning freefall."

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He then queried other students for their flying dreams, and received a variety of accounts. Jennifer Haas replied, "I can just start from a standstill. There are other people around, but I know I'm invisible. I can stop and start at will."

Chris Austin said, "As a kid, I never used to fly in dreams. But suddenly I would fall off a cliff. I would be terrified and wake up. But I would never just take off."

Based on the accounts gathered, Steve Stelovich concluded, "There seems to be a hardwired element: the sensation of moving through space. But the associated sensations are different. We have one person who is in control of his flying, but sometimes needs other people around to fly; we have a second person who is in terror of being in space; and we have a third who is in control of his flying but invisible. So there is a commonality to these experiences, but differences as well."

Allan Hobson responded, "Yes, flying does seem to be hardwired into the system, and it may be a substitute for some common experience, but there's no need to retain the notion that it's a substitute for a wish!"

Steve Stelovich objected. "I think the flying elements do have personal meaning in each dream. My own dream is blatant in terms of conflict. There, I can display myself, run free, and fly in front of other people. And in life, on the one hand, I can feel at ease while putting myself on display, for example, while lecturing. But, on the other hand, I can't let other people see what I've written. And similarly in my dreams, I don't fly as high when other people are watching."

Yet Bob Goisman pointed out, "Are you reading that meaning into your dream or is it already there?" And similarly, Allan Green suggested that "perhaps you know your own conflict so well you put it into your dream. I've noticed that when my patients have been analyzed, they begin to talk about their dreams in the same way analysts do."

"But," replied Steve Stelovich, "in my own practice, I don't delve into dreams unless I've looked at everything else first, and still don't know what's going on."

Scott Solomon then proposed that one could take a look at dreams and categorize them in terms of the actions that appear in them. He thought there ought to be between ten and twenty actions--transportation, sex, eating, and so on--which were the basic actions of life. The methods of interpreting dreams may vary, he thought, but their common elements ought to be small in number.

Allan Hobson agreed that it would be an instructive experiment to make such an ethological classification. However, Jeff Saver countered, "Are dreams any less rich than our own lives?" Allan Hobson replied, "There are reciprocities between life and dreams, but the question is how does one relate the two. The phenomenological approach has been very rigid due to the fixed Freudian ideas. We need to open up the field."

The group next remarked on an analogy between the phenomenological data collected in their brief discussion and certain details of neurobiological theory.

The pontine generator, they noted, in fact displays the same stereotyped activity each night, giving rise to similar motor patterns in every dream, a commonality the group had arrived at by comparing their flying experiences.

"But what about those who haven't flown in dreams?" Sarah Feldman asked.

Although Allan Hobson declined to offer an explanation, he did emphasize that the dreaming state is not fully pre-determined, that it is a highly plastic state which may have significantly different features in different dreamers. For example, some dreamers can achieve dream consciousness; some, dream control. "One can transfer between states, wake up in the midst of a dream and decide to fly in the next part." He again proposed that the group act on its ideas for experiments; for example, that it try to match dream reports with those who dreamt them, to classify dream activities, or to identify conflicts in dreams and trace their evolution.

The question of the exact neurobiological origin of dream images was then raised by Chris Austin. Hobson and McCarley state, "Specific stimuli for the dream imagery appear to rise intracerebrally but from the pontine brain stem and not in cognitive areas of the cerebrum."

Allan Hobson elaborated on this statement, saying that the problem the brain must solve during dreaming is how to operate with internal signals in the absence of external input. The visual cortex receives information about the parameters of the visual scene from the pontine reticular formation which generates eye movements, and the information is transmitted to the association cortex where an image is perceived. The excitability of the whole system is amplified five times above normal during REM sleep.

Val Slayton commented that it seemed the visual cortex wasn't really necessary in the pathway, if vision actually occurs in the association cortex. "But the whole visual cortex is involved in the process regardless of where it starts or ends," replied Allan Hobson. Furthermore, he continued, no one quite knows yet how we do get visual images out of analyzing edges and angles! The visual process of dreams starts from below the forebrain and must intersect somewhere in the cortex with the process of daytime vision that starts in the retina. The purpose of the pontine formation in dreaming is probably to provide a temporal schedule for the whole brain to use."

"Has anyone investigated the differences in dreaming in patients with lesions in the corpus callosum?" asked Val Slayton.

"Yes, there are a few with visual-cortical lesions, but not many. The neurophysiology of dreams is practically untitled," Allan Hobson replied. "It's to the credit of psychiatrists that the field has been coupled with neurobiology. If not for this trade-union idiocy, the field could have been started years ago. This is virgin territory."

"What about a teleological explanation?" Jeff Saver asked. "Why does the pontine generator fire in the first place?"

In response, Allan Hobson read a few sections from a paper to be published in the fall in Nature, asking the group to guess from its style who authored it. A synopsis of the reading is, "We propose that the function of REM sleep is to remove undesirable modes of interaction in the cerebral cortex, by a reverse learning mechanism, so that the trace of the dream's contents is weakened rather than strengthened by the dream. . . . There is a mutual excitation of unwanted, parasitic modes in the cerebral cortex which are detected and suppressed in the reverse learning process, which is not the same as normal forgetting." The author of the article, as Anya Hurlbert correctly guessed, was Francis Crick. The article also mentions a model of a neural network with multiple connections (Hopfield's) which tends to assume certain low-energy, stable configurations that can be thought of as memory states. In Crick's theory, the higher-energy, less stable states might be those the system "unlearns."

Jeff Saver wondered how the excitation of a neural network can lead to its disappearance. Allan Hobson, partly in reply, commented that theories like Crick's were very difficult to test, but that it did seem that one function of dreaming must be to achieve excitability control and another to influence the learning process. It's true that during sleep or REM deprivation, there's a great increase in excitability of the system, and the risk of seizures also increases. REM-deprivation experiments have been stopped, however, because they're unethical. "Experimenters aren't sure the resultant craziness is reversible." However, when EEGs are performed on temporal lobe epileptics, the patients are allowed to sleep only from midnight until four in the morning before being tested, in order to promise release of the foci. This schedule essentially REM-deprives the patients and allows the examiner to tap into sleep.

Allan Hobson summed up by saying that he had a lot of enthusiasm for the current state of the art. "We're now at the third level of ideas. The first level is the unit, Cajal's neuron. The second level is the reflex concept, the input-output operation. Now we have the third level: the interaction of populations and neurones. It is only at this level that we can begin to model states: of brain and mind. Hence, we need to be more sophisticated in psychophysical experiments. In any event, Crick's work will help to create interest in what has largely been a 'black sheep' field."

Launching the group into its concluding topic of discussion, Bob Goisman asked, "What does all this mean for psychoanalytical psychiatry? Freud's model of the nervous system led to his theory of dreams and others. Now it's been superseded, yet we still use Freud's theories, and hence, a 19th century model. And we each apply the terms of this theory to our patients; so we proselytize, inaccurately! Our attitude seems to be, however, 'The theory empirically works, therefore we'll keep on using it.' Are we so complacent--what do we need to be convinced that we must revise Freud's work?" He concluded, "I practice behavioural psychology instead; the metaphysics is easier to believe!"

Allan Hobson said that we must both give Freud his due and be ready to accept and initiate change. "Freudian psychoanalysis has given us a humane way to treat the mentally ill. The theory has great moral importance. Freud has had an enormous impact on the behaviour of psychiatrists, and I'm loathe to stab away at him and lose that humaneness. Still, psychiatrists must work to keep up with the

new developments in biology. Oldsters in the field will pay no attention to you unless you do a Freud on them--argue didactically in the way he used initially to win support for his theories. It is up to the young to change the face of psychiatry, while keeping a humane face. Crick's overly mechanistic view can be upsetting and dangerous. Perhaps we shouldn't remember our dreams? That's a very disturbing thought."

At this point, Steve Stelovich, whose Freudian background was the strongest in the group, could contain himself no longer. "Wait, I've got to say something. Don't throw the baby out with the bathwater! Freud may have been wrong in part, but he was also often brilliant, and had new insights. We owe it to our own profession that psychoanalysis has become the stupid thing it is. In the hands of the psychoanalytic association, the profession has attempted to make a dogma out of Freud's work. In psychoanalytic institutions, one learns a litany. We don't jeer at Cajal for making mistakes; why blame Freud? We must be ingenious enough to look at the interface between the different theories we have today and discover how they fit together."

Allan Hobson asked, "In what sense is this a problem of medicine as a whole? Is it restricted to psychiatry, which must more indirectly make its extrapolations to physiology?"

Steve Stelovich replied, "Psychoanalysis as a profession is out to lunch. It's bizarre, it's dogma, it's depressing."

Bob Goisman then suggested that the group take a look at Freud's own defensiveness. Freud writes, 'If you ask how much of dream interpretation has been accepted by outsiders--by the many psychiatrists and psychotherapists who warm their pot of soup at our fire (incidentally without being very grateful for our hospitality)....' 'Freud had a clear notion of insiders and outsiders,' said Bob. "That hard-nosed view of 'we're right' needs to be thrown out."

"That sort of view is inimical to any science," agreed Steve Stelovich.

As an example of the way in which devotion to Freud amongst psychoanalysts is carried to peculiar extremes, Steve related that Paul Rosen, in his book about Freud and his followers, revealed that Freud and Breuer had fudged their report of the Anna O. case. Then a psychoanalyst in Freud's defense said, "Well, Freud may have forgotten a few things in writing down the case," and considered the matter closed.

Alan Green asked, "Psychoanalysis is certainly clinically useful. But how does one learn from mistakes when one refuses to acknowledge they're there?"

Chris Austin also criticized this unbending attitude. "Most fields seem to incorporate research findings into their practice, but not psychiatry. Why isn't psychoanalysis amenable to research findings?"

"Because by its nature the research is so difficult to do," declared Alan Green.

Allan Hobson noted that there are several other reasons. "One, Freud is hard to follow. Analysts feel they need about fifteen years to figure out what he is saying. Then if an analyst disagrees, there he is at age 40, stuck in the middle of his career. Second, Freud, even though he is so complicated, is very logical, and if you change one thing in his system, you have to change everything."

"But," he concluded, "there are some hopeful signs." And, despite the differences they had aired, all the members of the assembly would have agreed that this meeting itself was one such hopeful sign.

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April 27, 1983

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# ORDER OUT OF CHAOS: THE PSYCHOLOGY OF CREATIVITY

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## Chapter 5

Order Out of Chaos: The Psychology of Creativity  
(Reprinted from The Ragged Edge)  
Meeting of 27 April 1983

Presenter: Scott Solomon

Host: Robert Goisman

Correspondent: Chris Austin with Val Slayton

"But turn to the highest order of minds (the human), and what a change! Instead of thoughts of concrete things patiently following one another in a beaten track of habitual suggestion, we have the most abrupt cross cuts and transitions, . . . the most unheard of combinations of elements, the subtlest associations of analogy: in a word we seem suddenly introduced into a seething caldron of ideas, where everything is fizzling and bobbing about in a state of bewildering activity . . .

. . . [T]he genius of discovery depends altogether on the number of these random notions and guesses which visit the investigator's mind. To be fertile in hypotheses is the first requisite, to be willing to throw them away the moment experience contradicts them is the next."

"Great Men and their Environment," 1880

Creativity is an exceedingly odd human ability: it is perhaps in its largest sense that which separates us as a species from our fellow creatures. We take for granted our propensity to dream up solutions to new problems, from our daily coping with a complex society to the technological triumphs of modern medicine. Whether listening to a Mozart string quartet, marvelling at the abilities of human-designed computer chips, or watching a child solve a new puzzle, we are delighted by the fluidity and surprising serendipity of our behavior. We are not restricted to a set of stereotyped responses as are most species, but actively observe and mold our world. These abilities have led us from caves to high-rise apartments, from horses to supersonic jets, from smoke signals to color television, and from leeches to the smallpox vaccine. Now in the nuclear age our inventiveness threatens to do us in. As fascinating and important as these abilities are, however, we find ourselves today in almost as complete ignorance about the mental processes involved as we ever were, and still can do little more than draw a light bulb over a head to signify the event. This meeting of the Seminar '82 attempted to address, if not answer, some of these important issues.

Scott Solomon and Allan Hobson had distributed several readings to provide an overview of previous thought on creativity. One of these was particularly intriguing; "The Major Theories of Creativity: A Critical Review" written by Silvano Arieti in his book Creativity: The Magic Synthesis. [Arieti, a noted clinical and research psychiatrist, is Professor of Clinical Psychiatry at New York Medical College and author or editor of several books on schizophrenia and general psychiatry.]

In the article, Arieti first points out that Joseph Wallas' landmark staging of the creative process remains generally applicable and widely employed today. Wallas envisioned four stages: preparation, incubation, illumination, and verification, defined as follows:

Preparation is the phase during which the creative person does all the preliminary work. He thinks in a sort of free way, he collects, he searches, listens to suggestions, lets his mind wander. The stage of incubation is inferred from the fact that a certain period of time, ranging from a few minutes to months or years, elapses between the period of preparation and that of illumination. We must thus assume that after the stage of external preparation, the collected material is not just stored in the creative person's mind, lying there in a state of passivity. Presumably, in ways unknown to us or of which we have little or no

consciousness, the accumulated material undergoes an internal elaboration and organization. The illumination occurs when the creative person sees the solution to his problem. It is at times a sudden intuition, or a clear insight, or a feeling--something between a 'hunch' and a 'solution' and at other times the result of sustained effort. In any case it has to pass the stage of verification in order to be definitely accepted by the critical evaluation of the innovator." (underlining added)

As useful as this empirical treatment is in structuring one's thinking about the subject, mechanistic considerations are lacking, thus leading one to ask, what is happening in the brain to bring about the stages?

A different approach, Arieti points out, was later taken by Guilford, who in an attempt to identify the essential elements of creativity first distinguished intelligence and creativity as separate cognitive functions, and then divided the intellect into memory and thinking, the latter being the more important to the creative act. In particular, "divergent thinking" was essential, which he defined as "a form of thinking that does not follow the beaten path of conformity or convention but proceeds toward unusual solutions" and characterized by "flexibility, originality, and fluency; or the ability to produce, rapidly, a succession of ideas that meet some requirements." Wertheimer offered the larger view that the creative act consists fundamentally of organizing thoughts like pieces of a puzzle into a coherent pattern, thus proceeding from a structurally unstable situation in one's mind to one with a solution, what might be referred to as a psychological lowest free energy state. Koestler for his part suggested that "bisociation" underlies all creative impulses, this being "any mental occurrence simultaneously associated with two habitually incompatible contexts." The implication here is similar to Wertheimer's, that these "incompatible contexts" represent an unacceptable conflict in one's mind which leads to new relations being formed between them, a synthesis reflected outwardly as a creative act.

As Arieti notes, the central problem with the theories proposed to date is that they stop exactly at the point in the creative process which is most interesting. The crucial step in Wallas's formulation is incubation; but one is led to ask, what is going on here? What is it about incubation which facilitates illumination? Arieti suggests that the information "reverberates in the neuronal circuits, completely outside of consciousness, in order to make lasting connections." This explanation does not tell us much. What does "reverberation" mean in terms of neurons talking to each other? And where in the brain is "outside of consciousness"; further, how are "lasting connections" being made and how does the illumination get back to consciousness?

Clearly the concept of "incubation" is a central one. The term is derived from the Latin "cubare", meaning to lie upon, or when speaking of creativity perhaps "to sleep upon," as we are often told to do when in need of an answer to a vexing problem. We are most familiar with the term from chickens laying upon eggs. Today, after much investigation, we can describe in great detail the developmental processes at work inside an egg, but for most of its history, "incubation" has been simply a label for the period of time empirically observed as necessary for the egg to hatch. We are in the same ignorant position today with regard to "incubation" in the creative process, and we need to define what is going

on here as precisely as has been accomplished for the chick's development. Unfortunately, in this case we cannot simply crack the egg and look.

Arieti summarizes the contributions of psychoanalytic theorists to the study of creativity by concluding that each suffers because it is adapted from another focus of psychoanalytic thought and thus has marginal applicability to creativity. Specifically, these thinkers concerned themselves primarily with motivation, and as Arieti points out this is not a specific determinant of creativity. Uncountable numbers of people have had motivation to sculpt; nonetheless, there are very few Michaelangelos.

Scott Solomon, the evening's presenter, opened the Seminar's discussion by telling the group that he had been led to ponder many of these questions of creativity by his avocation of writing and performing music. Although he had experienced the "flash of creative insight" many times, he was at a loss to explain what actually happened and hoped that the group together might have more success. "One can approach the subject of creativity analytically or creatively," he said, and although it was perhaps contrary to medical students' accustomed training, he urged that the group avoid the analytical. "Rather, try to put yourself in a frame of mind in which you feel creative, in which you can experience the process of creative insight that allows you to go from here to there without having any idea what happened in between." Drawing upon his experience in improvisational jazz, Scott pointed out a distinction between the craft (technical skill at playing the piano) and the creative act (resulting in the improvised music). He suggested that two topics be avoided: first the matter of simple technical proficiency of craft, and second, the ever-unanswerable question of "What is art?" He hoped the Seminar would instead focus on the mechanisms of Wallas' stages, noting that these categories provide a meaningful framework within which to think about the creative process without answering the most central and interesting question of how the stages take place. Particularly, he asked, "What is the nature of that leap from simple ability, for example, to write or draw, to the novel constructions of creativity? And secondly, why do we create? What purpose does it serve and why did it evolve?"

To get the group thinking on these issues, Scott offered two examples. First, he asked us to consider the phenomenon of speech and the thought processes which generate it. "If you think about the process of speaking aloud while doing it," he said, "you become tremendously self-conscious. It's an amazing thing to be able to talk, to at every moment be creative in the act of forming sentences. This ability is virtually universal in human beings; but it isn't universal in its form or quality, as these are perhaps more dependent on intelligence, experience, and education." As his second example, Scott drew an analogy between the mental process of invention and the physical process of gene shuffling in the immune system. "When I compose music," he related, "at one moment the music isn't there in my mind, and suddenly it appears. There is an element of randomness in the taking of facts and techniques I've learned, jumbling them to create new combinations, evaluating how good they are, then re-jumbling, re-evaluating, and so on. When a person's immune system is developing, antibody genes recombine the same way, in part randomly, creating many different antibodies and thus an effective immune response." The lymphocyte, or white cell, is the body's main defense against germs, transplanted organs, and other foreign invaders. It acts as a field marshal to recognize the invaders and make antibodies against them, so that the invaders might be eaten by other cells of the immune system. While a human being is but an embryo a few inches long, pieces of the genes which code for antibodies are separated by long

stretches of other DNA in the lymphocyte. (DNA, or deoxyribonucleic acid, is the universal language of heredity. It is organized into discrete stretches called genes, each of which codes for a particular characteristic—e.g., brown hair, blue eyes—of an individual.) When lymphocytes in the fetus come of age, their antibody genes are brought together and shuffled like cards before a poker game, and each lymphocyte ends up with a sequence of genes different from all the others. When these genes are then read in order to make antibody proteins, all the lymphocytes make different antibodies, and this is what gives human beings the ability to fight off literally millions of different invaders using only a few thousand genes. It is important in this analogy, Scott pointed out, that some of these proteins work as antibodies, whereas some are complete failures, just as are some of the ideas generated in the creative process. "What happens to give an effective immune response is the same kind of process which brings about the new combinations of ideas people call creativity," Scott concluded.

As a starting point to address all the questions Scott had raised, the group entered into a discussion of how creativity and its most important properties might be defined. The first issue tackled was whether evaluation, or "verification" in Wallas's terms, is indeed an element in the creative act itself or is instead a separate event taking place after the actual creative process has generated many possibilities. Alan Green asked Scott what role evaluation played in his musical composition--how did he generate the note patterns and how did he recognize which were good and which weren't? "I wish I did," Scott replied, "but I really have no idea how either generation or recognition takes place. I have note patterns floating around in my head all the time and they're constantly reshuffled, and gradually groups of notes become entities. I might use some old patterns, but I'd have to use them in slightly altered ways. If I play patterns that are predictable, like replaying tunes somebody else wrote, that isn't creative. I find the most important thing is just to be loose, letting all sorts of patterns bump into each other in my mind, even though some of the products won't be good. What comes next is the verification--or rather, self-criticism which sometimes results in verification--and this allows me to pick out what's good. I really don't know how I assess the products; it's a very subjective process, and maybe that's one reason there's so much garbage around being called music."

Paul Unger objected to the inclusion of evaluation in the group's conception of creativity, saying that the fact that something has been produced is reason enough to say that creativity has occurred. He sees creativity as a process, not a result, he said. Alan Green countered, however, that "there is a difference between a totally random process being called creativity, and a random process with superimposed order guiding it being designated as such. When I play the piano, I can play written music, but I can't improvise, because I don't have any framework on which to base my patterns or higher musical intellect to help me evaluate what I'm playing." In response, Paul questioned whether such a higher order evaluation was necessary, saying, "If I was allowed to play before huge audiences at Carnegie Hall, and all I did was bang on the keyboard, the audiences would surely call me creative. You've got to define creativity in a social context--that kind of banging wouldn't have been considered creative 50 years ago in the same circles which are hailing it now. Is John Cage creative?" (Cage, a modern American composer, is known for his use of unconventional objects as instruments to make very unconventional sounds.) Again, Paul said, such a judgment depends on whether evaluation is included in one's definition of creativity. If it is not included, Cage surely is creative; if it is, one could say he is either not creative or has what many would consider a remarkably undistinguished evaluator.

Peter Rintels then asked whether the essential element in creativity isn't to give new meanings to old things, and whether creativity isn't dependent on evoking novel images or meanings. Alan Green agreed with Peter's idea, adding that perhaps a work is creative if it represents ideas or meanings never put together in exactly the same way before. Since our current perceptions define novelty, this definition makes some sense. Paul Unger agreed as well as long as this novelty was defined in terms of each individual's experience. He illustrated the importance of this point with the example a child aligning a picture he had drawn. "His parents kept telling him that the picture was upside-down and turning it around, but the child kept disagreeing and turning it back. The child finally broke the cycle by flipping the picture over rather than turning it around. Since the pattern could be seen through the paper, he had achieved his alignment a new way. This was creative on the child's part, because he had never done it before, but it certainly wasn't novel in the scope of human experience." Novelty has to be individually defined.

The group then turned to the role that craft (that is, acquired knowledge or technique) plays in the creative act. There was general agreement that creativity is fundamentally a process rather than a result; a tremendous amount of preparation and knowledge is needed, however, before one can engage in it. Sarah Feldman noted that "creative people are often described as especially perceptive, and I wonder if this heightened perceptivity helps them to learn a craft or evaluate a product." Sarah then suggested that technical skill is such a necessity for creativity in writing or performing music that teasing away the role of craft using this example would be difficult. Looking at how different individuals describe such a commonplace object as a beer bottle (an example near at hand) might be a more generally instructive procedure. Some people, she reasoned, will be creative and perceptive in this task, while others will not.

Several members offered descriptions, and not surprisingly the validity of evaluation was soon again being debated. "How are all these statements different," Peter Rintels asked, "and how are they different from simply saying that this is a green beer bottle?" Scott remarked that some descriptions might be more original because they take more risks. Val Slayton stated, "This is a cow," and asked if this description was creative or crazy. To Val's query Sarah Feldman replied that "perhaps it's both; one has to know how you made the superficially random connection between the beer bottle and a cow to decide. What was your process? Did you think, for example, that the beer bottle contains a vital life-giving fluid, as does the cow, and thus that they're the same?"

Alan Green pointed out that a coherent reasoning system generally accepted as "normal" serves as a guide in these associations and distinctions in daily parlance. Scott inquired what role logic therefore plays in the creative process. "Is creative material illogical because you can't state the method by which somebody arrived at their product? What is the difference between a poet and a schizophrenic?" "Creativity is an unusual and highly emotional phenomenon," Alan responded, and a psychotic patient feels creative when drawing relations which would not evoke the same highly charged feelings in healthy people. Peter Rintels was inspired to wonder, "Does a schizophrenic or an autistic child see his ravings as creative? Perhaps genuine creation requires production of new meanings which are shared by others as correspondent to their own experience. Both artists and psychotics give new meanings to old things, but artists usually create in the context of their society, while psychotics recognize no such society and so create according to truths and relations known only to them."

Peter went on: Isn't it true that if creativity is the creation of new meanings, then the first step has to be the mastering of old meanings? Thomas Kuhn in The Structure of Scientific Revolutions suggests that only scientists intimately familiar with an area of knowledge realize when scientific crises develop there and synthesize relevant facts to create new theories. Einstein, to take an example, was by all accounts a creative fellow, but he didn't create in a vacuum. He had a lot of training and a lot of craft, and he's a prime example of an innovative scientist who recognized a scientific crisis and looked at science in novel ways to solve it. He did this apparently by trying to think about problems visually, and thus gain an intuitive understanding of complex physical relations."

The discussion of Einstein led Sarah to ask whether intelligence per se is an important component of the creative personality, or a hindrance to it. "Is intelligence a separate issue from creativity?" she asked. "For instance, was Scott's analogy about creativity and genetics creative in and of itself, or was it simply intelligent? Or was it both, one being necessary for the other?" Chris Austin pointed out in response that an individual might easily do well in school work and thus be considered intelligent, but might not be creative at all. "These kinds of judgments are possible because much of what we consider intelligence helps you learn a craft, whether that be medicine or painting, but it doesn't necessarily help you see new relations, and we recognized that ability earlier as essential to the creative personality. In fact, intelligence can hinder creativity if it's of the rote, memorizing kind that gets you stuck thinking in a stereotyped way." He reminded the group that this phenomenon, of prior knowledge and experience having detrimental effects in new problem solving situations, was first recognized by the Gestalt psychologists who described it as "functional fixedness" or "negative transfer." For example, one might consider a beer bottle only as capable of holding beer, and fail to observe its possible use as a flower vase.

Jennifer Haas questioned further the necessity, and desirability, of intelligence to the creative process, saying that she feels most creative when she is thinking least about doing something. She needs to relax from her normal state of actively processing incoming sensory and intellectual data in order to be original. "Evaluation is not included in this state; that's a cognitive process that comes in only later." Sarah Feldman countered, however, that she sees a cognitive element as absolutely necessary to being creative; a severely retarded person is not considered creative, no matter what he or she does.

All of the qualities which the Seminar had decided define creativity are needed, Ebbie Stewart observed, in performing a physical examination on a patient. "The essential question is how to go about learning the person's problem, and you have to be flexible in interacting with the patient rather than rigidly following lists of questions. If a patient says 'I have plants growing out of my head', you shouldn't go right on and ask about shortness of breath." Being creative here consists, Allan Hobson and Alan Green concurred, in being able to listen, process the answers one is given, and ask questions to follow up on specific points. Dismissing the compulsive need to ask the next question from the interview book is the key. "Medicine," Ebbie said, "must be sensory--noticing gestures, hearing tones of voice, and getting into the gestalt of the interaction instead of getting stuck on the most explicit cues the patient's giving you." Allan Hobson went along with Ebbie's

early intuitions about history taking, agreeing that one must be able to make jumps and follow up on things which seem extraordinary. "One needs to have novelty as a state of mind in history-taking; lists cannot be utilized. Receptiveness and a delight in novelty are much more important. The huge mnemonic task of memorizing facts in medical school is an ironic necessity when you look at how creatively these facts have to be used later if they are to do you any good." Ebbie wondered if she could increase her own ability to have insight and thus be more successful at history taking if she followed her own and the group's advice, stopped using lists and confined her mind less. "Simply realizing that you need to change your approach if you're not getting anywhere is an important step," Peter Rintels (a fourth year student) assured her. "One needs to recognize that non-creativity exists." Bob Goisman suggested that perhaps practice makes perfect (or at least better) in this situation. Draw in order to draw better. Write in order to write better. Give yourself a chance; put yourself in a position to be creative. Given all the advice, Ebbie laughed that "someday soon I think I'm going to deliberately forget my lists!"

Thinking about the future of these considerations, Scott Solomon pointed out that computers exist which can perform some of the same functions as physicians in medical history-taking, asking questions, analyzing lists of symptoms and constructing differential diagnoses. These machines lack the ability to make jumps in logic or see novel connections, however, precisely because they can make only the connections programmed into them. They are, therefore, incapable of taking a history in the way Ebbie described or making an unconventional diagnosis. Choosing between diagnostic possibilities may thus remain the exclusive domain of the human physician, Scott concluded, at least until the advent of the "thinking" supercomputer.

The discussion of medicine brought the group back to a consideration of evaluation's role in the creative process, for Chris was struck by the essential difference between art and science on this point. In science and medicine, he said, there is an objective truth toward which all investigation moves; while there may be disagreement for a time, individuals eventually agree on which alternatives are correct and which are simply musings of a creative imagination. However, particularly in theory-making and model building, science is as dependent on and susceptible to creative syntheses as are music or sculpture. Illustrative of this point, he pointed out, was Leonardo da Vinci. Endowed with a prodigiously creative imagination, Leonardo was able to make revolutionary contributions to fields as diverse as painting, sculpture, human anatomy, and engineering.

"Despite its commensurate dependence upon creativity," Chris continued, "art is essentially different because there's no objective truth toward which all the participants are moving." Liz Mort interjected that this lack of an endpoint is essential for "new artistic movements often begin as intellectual movements, spawned by a dissatisfaction with present standards. A novel set of ideas serves as a 'cliff to jump off of,' a place to start creative wanderings from."

"Exactly," Chris agreed. "This is, I guess, why the history of science is a basically linear progression in which new knowledge tested and modified hypotheses which to that time had explained everything that had been observed. The history of art is much more one of movements which considered one element or another of artistic expression as most important, although certainly every artist learned from his predecessors. What's intriguing is that the technical abilities of artists haven't changed very much in the last 500 years, and yet art has changed tremendously. Is

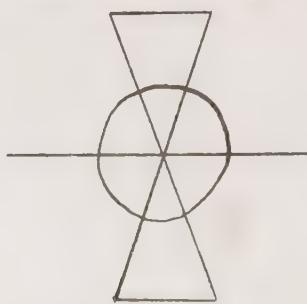
this due to changing standards of evaluation, of what's considered 'good' or 'bad'? The paintings of Picasso would have been considered artistic heresy during the Renaissance, because evaluation then was based on completely different assumptions, although their preparation, incubation, and illumination were probably pretty much the same. Evaluation is a separate issue from creativity for some artists today, as Paul was saying earlier." He told the group about a movie he had seen of the painting technique of Jackson Pollack, a well-known American artist. Pollack first put himself in a creative mood, and then walked over his canvas dropping and throwing paint to construct the work.

"What was Pollack's reaction to what was on the canvas?" Bob Goisman asked. "Was his act of painting what is creative, or was it his reaction to it?" Peter Rintels inquired further: "Was Pollack merging his unconscious with physical action?"

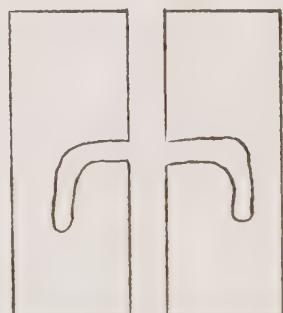
"The most important thing to Pollack," Chris answered, "wasn't the final product, but rather the creative fire which gave rise to it. The painting was unavoidably a pale reflection of what he felt while doing the work, but was worth looking at to gain an intuition of that inspiration. That approach is really an incredible departure from earlier eras where artistic realism was the only relevant consideration. In addition, it constitutes a major departure from science; anybody with enough training could come up with hundreds of explanations for a given scientific observation, but what's important is who's right. Good evaluation is the mark of good science."

Anya Hurlbert expanded on these points, calling attention to the earlier artists who had to use strict formulae. Whether they were musicians composing in rondo form, poets writing in iambic pentameter, or painters creating realistic images of the external world, one could hardly say that these more classical artists were less creative than moderns simply because they were more constrained in style. She bid the group not mix up the spirit of the creation with the form.

Sensing that the group had been having trouble describing exactly what the creative moment is, Bob Goisman commented that "the 'AHA!' experience, the moment of insight, is something common to everybody here, so why is it so hard to grasp? Why can't we say for sure what the process is?" This "AHA" moment seemed like a good way to get at the problem, so Scott asked members to contribute brain-teaser problems which require novel insights for their solution and thus might prompt the "AHA". Experiencing the phenomenon might help in describing it, he suggested. Among others, the following problems were forthcoming:



Draw this figure without crossing over lines, retracing lines, or lifting the pencil off the paper.



What is this?

"One comes up against these kinds of challenging problems all the time," Scott noted. "Like when you're trying to convince a woman that she wants to go out with you when she doesn't know it yet. The solutions to these problems contain powerful elements of both craft and inspiration!"

The contemplation of these puzzles prompted Chris to conclude that the group had identified but not explained the central mystery of creativity; it was the point at which Arieti's article had stopped as well. "What is going on during incubation which allows illumination and what exactly is happening in illumination?" he asked. In the absence of any neurophysiological data whatever on the subject, he suggested group members turn for answers to inference from their own personal experience with creativity. "Two experiences come to mind which address these issues. The first comes from singing with the Testostertones (a male close-harmony singing group at HMS). Our main impasse in being able to perform a new song is learning the notes well enough to not need music to sing it. After we reach this point we can move away from the technical craft and into a creative 'groove' that allows us to listen to each other. We all try out spontaneous musical ideas in singing the piece over and over again, and gradually it begins to sound right. The other experience is a more focussed one, a visceral feeling I get when I'm concentrating hard on generating a lot of possible solutions to a problem. My awareness and processing of sensory inputs are greatly diminished, although I can still hear and see things to some extent, and I can be distracted pretty easily from the concentration. It feels like there are thousands of tiny mice running around in my head. Although it's probably absurd, sometimes I think this sensation reflects thousands of neuronal connections in the brain being tried out and discarded before the thoughts they'd generate come to consciousness. In this state, I'm aware of some possibilities which do come to mind and I can then evaluate them; but a lot more I can feel almost getting to consciousness but being edited out as not appropriate before they get there. It's a wild demonstration of the mental gymnastics that the human mind is capable of. Are the EEG (electroencephalogram) changes recorded during intense thinking perhaps a reflection of this kind of process? And further, do creative people have this kind of experience more often than "normals," and do they have more "combinatorial" neurons?"

Ebbie suggested that perhaps creativity involves the turning off of inhibitory neurons and the turning on of excitatory ones. Sarah asked Chris how the experience of creating novel solutions to problems differed from that of having an already learned exam answer on the "tip-of-the-tongue." "On an exam you're given direction to one specific answer," he explained, "while if you're generating new answers from scratch the feeling is one of a lot of potential ideas, and the mice in the brain moving in every direction at once."

Alan Green noted a similar experience in his novel writing, saying that he often has no idea what he will write when he sits down to do so. "If I'm 'blocked' on something, I'm never sure how much of the block is emotionally related, and how much is cognitive. But I find I can often get out of the block and tap into the elusive creative thoughts zipping around in my head by decreasing my active thoughts in the same way as Jennifer and Chris described." He questioned the accuracy of observers who look later at his finished work and say that they see exactly what he had set out to do with his writing, for he himself is often unaware of how he ended up with the final product. "Is your writing then predominantly an unconscious or conscious process?" Bob Goisman inquired. Alan replied that perhaps it is more the former, for he can be in almost a trance state when writing.

Several students wondered whether this "trance state" was the same sort as those that may be induced by having a beer, taking drugs, or reading a good book. For creative people, the problem is clearly letting the brain be free of constraints and try out various solutions, not trying to make it move in a specific direction. The origin of the widely experienced inability to create on command was thus clarified, for the simple giving of direction inhibits the brain function one wants to excite.

Jeff Saver then wondered out loud how the cognitive specializations of the left and right brain might be involved in these phenomena. "The left hemisphere," he said, "is currently viewed in the popular press as logical, attentive, and editing, while the right is seen as the keeper of imagination, gestalt, and the "AHA." Perhaps one needs to turn off the left side in order to allow the right to become active and express itself in creativity. A patient I saw while I was working in this field during the summer after first year (of medical school) supports this idea. A major portion of his right hemisphere had been destroyed, but his left side was perfectly intact. He was unable to find anything funny unless it followed clearly established rules of logic--novel or unexpected events, as are found in cartoons, were just not funny to him, but rational puns were." Jeff and Anya Hurlbert both suggested that it might be possible to train creativity into or out of individuals by using appropriate right-brain and left-brain training techniques.

Along these lines, Peter Rintels was reminded of the rigorous training Zen monks go through to achieve spontaneity and creativity, which he contrasted to the immediate reliance on spontaneity and free association in psychoanalysis. "To achieve an ultimate level of spontaneity, the monks spend years in a monastery, grappling with such nonsense riddles "where does the fist go when the hand is opened?" and "what is the sound of one hand clapping?" These unanswerable koans precipitate a crisis in an individual's logical world-view and he's led with the help of meditation to master the novel views of Zen teachings." Bob Goisman added that in Zen, the goal is creativity and wisdom about the nature of the world. In psychoanalysis, by contrast, spontaneity and creativity are prerequisites for the process of free association used to give insight into the nature of oneself. Unfortunately, such insight may obstruct the creative drive, Bob pointed out; after psychoanalysis artists have sometimes found that their creativity grew out of their neuroses, and that they had lost their creative abilities with their neuroses.

The discussion then turned briefly to the second question Scott had asked at the beginning of the evening: "What drives humans to create?" Bob Goisman answered, "we can't help it," while Scott suggested that the root is "fun; it's an element of joy" at both the process and the result. Linda Leum made the intriguing suggestion that the adventurous experience and the creative experience are inseparable. She suggested that the same basic impulse drives us to climb mountains and write symphonies: a yearning for and a fascination with the novel, the towering; the feeling of doing something transcendent and outside the pale of everyday life. Bob Goisman agreed and commented that patients with temporal lobe epilepsy feel such significance and intensity, but spontaneously, without any impetus, suggesting the existence of a functional focus in the temporal lobe of the brain which generates these sensations.

Scott pursued this physiological argument, noting that Allan Hobson and his collaborators have theorized that dreams occur when random neuronal firings generate sets of images. He wondered whether we might explain creativity analogously: certain sets of neurons in the brain firing randomly might favor the generation of new ideas in the creative state in the same way that other

randomly-firing neurons favor the generation of images in the dreaming state. Perhaps drugs and psychoses put people in these very same states, he pointed out, again suggesting a functional brain focus. As in temporal lobe epilepsy, however, this induced randomness does not usually generate ideas or images which are appreciated by anyone else.

With these considerations of brain biology, the meeting drew to a close. William James once characterized genius as "little more than perceiving in an unhabitual way." If this be true, perhaps the term "creative genius" is redundant, for the Seminar had found novel perceptions to be central as well to creativity. The neuronal basis of this wonderfully human propensity was the limiting reagent in the group's analysis, and may well remain obscure for some time. But when this mystery is solved, it will surely be in a moment of illumination, and will be a consummate triumph of mind examining body, to discover what the body is doing when the mind discovers. The mechanism will undoubtedly be one unfathomable to us now, and the marvellousness of its design will give us further reason to wonder at our specialness. It will be a moment of celebration.



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May 15, 1983

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# RETROSPECT AND PROSPECT: YEAR ONE

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Chapter 6  
Retrospect and Prospect--Year One  
Meeting of 15 May 1983

Host: Allan Hobson  
Correspondent: Jeffrey Saver

"Wherever you are it is your own friends who make your world."

Letter to Pauline Goldmark, 1899.

("It was in the earliest seventies (1870's) that a knot of us young men in Old Cambridge, calling ourselves, half-ironically, half-defiantly, 'The Metaphysical Club,' . . . used to meet, sometimes in my study, sometimes in that of William James. It may be that some of our old-time confederates would not today care to have such wild-oats-sowings made public, though there was nothing but boiled oats, milk, and sugar in the mess."

C.S. Pierce, Collected Papers, c. 1906)

The last regular 1982-83 academic year meeting of the William James Seminar-Cohort 1982 was held at Allan Hobson's house in Brookline. Attending the meeting were Ebbie Stewart, Liz Mort, Chris Austin, Scott Solomon, Alan Green, Val Slayton, Lee Learman, Shelly Greenfield, Jennifer Haas, Bob Goisman, Allan Hobson, Anya Hurlbert and Jeffrey Saver. Burgers, franks, beer, soda and the psychology of patio barbeques were the order of the day and a fine time was enjoyed by one and all.

We did end the evening, however, with a short, plenary session of the seminar members present at which a few topics of note were discussed. Jeffrey Saver began by asking members to reflect from the perspective of the end of the WJS's first year upon aspects of the way the group ran that we might consider modifying and improving next year. Allan Hobson first wanted to know what students generally thought of their experience in the WJS. Was it valuable? What was it like?

Chris Austin responded that he appreciated the group for providing a forum in which to explore a different way of thinking from the way we're taught to think at HMS. WJS meetings were refreshing and unique opportunities to reflect on topics and ideas we'd otherwise have neither the time nor the institutional support to devote ourselves to. Scott Solomon said he was particularly fond of those times the group addressed issues that lay in the "cosmic unknown" and urged that we try in the future to focus on just such stimulating, unsolved topics. The WJS, he noted, was a nice little think-tank he enjoyed being a part of. Elizabeth Mort added that she appreciated being invited into faculty members' and students' homes, seeing the diverse ways people lived after Vanderbilt Hall. Shelly Greenfield said another worthwhile aspect of the WJS was that it brought faculty and students together in an informal way, making her feel she was in a true graduate school, one which valued and encouraged the free give and take of stimulating ideas. She said she appreciated the time the faculty devoted to the group. Allan Hobson responded by saying the faculty appreciated having informal contact with students as much as the students appreciated contact with the faculty. Faculty members, he noted, are also funnelled by sociological pressures into narrow channels of interest. The ideal university of a community of scholars does not exist in practice, you have to create it for yourself.

The group also discussed a number of possible changes and future plans for the WJS. Unfortunately, your faithful reporter was not at the time making a full record of the discussion. Therefore, I shall try below merely to summarize the substance of our talks on each topic.

### Summer Meetings

We decided we'd try to meet 2 or 3 times over the summer even though our ranks may be severely reduced. Meetings will be more informal than those of the regular year.

### Second (now Third) Year Members

It was noted that a sharp decline in the number of attending second year students had occurred at the last few meetings. Was this due to a) their busier schedules; b) breakdowns in communication about meeting times; or c) an unintended feeling that they are not as integral to the WJS-Cohort 1982 as first year students? The feedback that various members present had received was that at each meeting second year students had been absent for various individual reasons, and no clear pattern was apparent. The group wanted to assure second year students that their presence was sorely missed and greatly desired. It was noted that one of the attractions of the WJS is that in addition to allowing informal contact between faculty and students it allows informal contact between students of different classes as well. The idea of selecting a second year student coordinator who could work with the present first year student coordinator and who would have more intimate knowledge of the concerns and activities of his or her own classmates was bruited. Suggestions on this topic from second year members are welcomed.

### Moderation

One possible reason for a decline in attendance of members in general that did emerge was that some members had felt unable to join fully in group discussions. Some, for example, felt that the group was too large and unwieldy to allow fruitful exchanges. It was pointed out that while this problem may have been true of our first couple of meetings, the process of attrition had since brought the group down to a quite workable size. Members who had left earlier for this reason were encouraged to give the group another try.

A second difficulty discussed was that sometimes the more forceful, less inhibited members of the group controlled discussions at the expense of quieter, more polite group members who had points of equal merit to make but could not gain the floor. It was suggested that perhaps the group should have a rotating moderator at each meeting who would be responsible for ensuring that everyone who wished to had a chance to speak, but who would not direct discussion to or from certain topics—a "process moderator" rather than a "substance moderator." Then again, it was generally felt that the problem of excluding members from speaking was not an extreme one in the WJS and a little consideration and thoughtfulness on the part of each member might suffice to take care of the problem—"self moderation."

### The Book of Proceedings

A request for a group member who was artistically inclined and who wished to help put together a volume of the notes of our first year similar to that Cohort 1981 devised last summer was made. It was answered by a resounding silence. The group then decided to ask Cohort 1981 if they would like to issue a joint volume and if their artistic director would organize our contributions. Two willing but less than artistically gifted Cohort 1982 members (Chris Austin and Jeffrey Saver) volunteered to help said designer in this task over the summer.

### Future Meeting Topics

It was felt that we might improve upon our informal, collective method for choosing topics of discussion of future meetings. Student members were encouraged to individually think of topics of "mind-body interaction" for which they would like to be responsible, including choosing readings and guiding discussion. This approach seemed to hold much promise, for two students immediately volunteered interesting topics on which they wished to organize meetings next year. Members in general were urged this summer to think of topics congenial to them and it was hoped that when we returned in the fall we might be able to lay out a full schedule of topics at our first meetings.



September 28, 1983

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# PSYCHE AND HEALING

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**Chapter 7**  
**Psyche and Healing**  
**(Reprinted from The Ragged Edge)**  
**Meeting of 28 September 1983**

**Presenter: Chris Austin**  
**Host: Alan Green**  
**Correspondent: Jeffrey Saver**

"I embraced the medical profession a couple of months ago. My first impressions are that there is much humbug therein, and that, with the exception of surgery, in which something positive is sometimes accomplished, a doctor does more by the moral effect of his presence on the patient and family, than by anything else. He also extracts money from them."

Letter to Jeannette Gourlay, 1864

The first meeting of the William James Seminar '82 during the 1983-1984 academic year was held at the apartment of the soon-to-be-married Alan Green. Partaking of champagne and cake in honor of the upcoming nuptials and of the evening's discussion on "Psyche and Healing" were Jennifer Stone, Alan Green, Anya Hurlbert, Sarah Feldman, Daniel Barboriak, Paul Unger, Ebbie Stewart, Shelly Greenfield, Elizabeth Mort, Val Slayton, Jennifer Haas, Jeffrey Saver, Tal Laor, Allan Hobson, Scott Solomon, Bill Fletcher, Lee Learman, Linda Leum and Chris Austin.

It is the misfortune of modern medicine that it must daily confront one of the great unsolved riddles of the twentieth century: how to apply ever more powerful technologies to human affairs without depersonalizing human life. In medicine this problem has assumed the now all too familiar guise of doctors forced to attend more and more to the byzantine intracacies of sophisticated new techniques at the expense of establishing close, supportive personal relationships with their patients. Patients not unnaturally find their resulting detached and mechanized medical experiences frustrating. Their dissatisfaction results not only in the well-known paradox of a simultaneous decline in respect for physicians and increase in medical treatment capabilities, but also, more subtly, in less than optimal patient care. The achievements of medical technology have overshadowed but not expunged the age old insight that the spirit of the patient, his or her faith, confidence and will, plays an important role in the healing process, that mind and body interact in disease as well as in health. This truth and the related challenges of technology were the subject of this meeting of the William James Seminar '82.

Every great problem is also a great opportunity. Physicians possess one unique advantage over all the other professions and disciplines in attempting to unriddle the challenge of technology: the patient. The ill individual under care provides a sort of direct, urgent and personal feedback on interactions of technology and human values unavailable in any other field. If medicine's record of listening to and learning from the patient is not unblemished, it is nonetheless long and fruitful. It was fitting then that seminar members had read excerpts from Norman Cousins' Anatomy of an Illness as background for this evening's discussion of mind-body interactions in illness. Cousins, the former editor of Saturday Review and current member of the faculty at the School of Medicine at the University of California

in Los Angeles, is the most prominent recent patient to play the indispensable role of educating his doctors. His works have sparked a renewed interest within the medical profession and among the general public in the field of psychosomatic medicine--that is, in the way attitudes and emotions can bring on disease or improve the prospects of recovery.

Cousins launches Anatomy of an Illness with a description of his own experience with a life-threatening illness and the rather unorthodox mind-body treatment approach he implemented to recover from it. In 1964, Cousins was diagnosed as having ankylosing spondylitis, a degenerative (and at that time generally fatal) disease of the connective tissues. Rather than resignedly submitting to the routine ministrations of hospital staff, Cousins took an enthusiastic, participatory role in confronting his illness and determining his care. Pharmaceutically, his major therapeutic innovation consisted in taking massive doses of vitamin C. Psychosomatically, and more influentially, his novel contribution lay in stressing the importance of achieving--and going to great lengths to achieve--an optimistic emotional outlook. Aware of preliminary studies which suggested that "negative" emotions such as frustration and rage could diminish an individual's resistance to disease, he determined to not merely avoid such feelings, but also to systematically pursue "positive" emotions such as faith, hope, love and laughter. Toward this end, Cousins checked out of the noisy, distracting and impersonal hospital he had entered and into a hotel room which offered a more serene and controllable environment, and, incidentally, a significantly smaller bill. He nurtured his resilient natural capacities for hope and love. Lastly, and notoriously, he sought amusement and genuine laughter by reading humorous books and watching Marx brothers films. And he recovered.

Cousins proceeds from this extraordinary tale to summarize in the body of his book the wide array of research that has been conducted over the last 25 years into different areas of mind-body-illness interactions, including the placebo effect, the nature of pain, the relationship between creativity and longevity, and the holistic health movement. He then concludes with a chapter describing the reactions he received from physicians, patients and other readers when he first published an account of his illness in the New England Journal of Medicine. As a whole, Anatomy of an Illness is a powerful brief for respecting "more fully the natural drive of the human mind and body toward perfectibility and regeneration."

Terming the Anatomy of an Illness "one of the most extraordinary books I've ever read," Chris Austin began the evening's discussion with a warning for those who would dismiss Cousins' position as calling for a naive rejection of modern medicine. "In fact," Chris argued, "his point is exactly the reverse: that the individual patient should become a full participant in his advanced medical treatment, mobilizing the inner resources that are too often left out of today's high-tech medicine."

Chris noted that one of the larger issues that Cousins' work raised concerned the tremendous influence that the discourse of doctors exerts upon patients under their care. To emphasize this point, Chris read to the group a passage written by Harvard Medical School Professor of Cardiology Dr. Bernard Lown. In his introduction to a more recent volume by Cousins which dealt with Cousins' recovery from a heart attack by again employing the strategy of a positive frame of mind, Lown wrote,

"In one of my first clinics, I had as a patient Mrs. S., well-preserved, middle-aged librarian who had a narrowing of one of the valves on the right side of her heart, the tricuspid valve...Dr. Levine, who had followed her in the clinic for more than a decade, greeted Mrs. S warmly and then turned to the large entourage of visiting physicians and said, 'This woman has TS,' and abruptly left.

No sooner was Dr. Levine out of the door than Mrs. S's demeanor abruptly changed. She appeared anxious and frightened and was now breathing rapidly, clearly hyperventilating. Her skin was drenched with perspiration and her pulse had accelerated to more than 150 a minute. In re-examining her, I found it astonishing that the lungs, which a few minutes earlier had been quite clear, now had moist crackles at the bases. This was extraordinary, for with obstruction of the right heart valve, the lungs are spared the accumulation of excess fluid.

I questioned Mrs. S. as to the reasons for her sudden upset. Her response was that Dr. Levine had said that she had TS, which she knew meant 'terminal situation.' I was initially amused at this misinterpretation of the medical acronym for 'tricuspid stenosis.' My amusement, however, rapidly yielded to apprehension, as my words failed to reassure and as her congestion continued to worsen. Shortly thereafter she was in massive pulmonary edema. Heroic measures did not reverse the frothing congestion. I tried to reach Dr. Levine, but he was nowhere to be located. Later that same day she died from intractable heart failure. To this day the recollection of this tragic happening causes me to tremble at the awesome power of the physician's word."

(Dr. Lown proceeds to demonstrate that "words can not only smite but also heal," by describing a patient of his who made a remarkable recovery from a massive heart attack after misunderstanding Dr. Lown's comment that he had a "wholesome gallop" to imply that his heart was healthy rather than compromised enough to give such a poor prognostic sign.)

In concluding his introduction to the evening's dialogue Chris revealed that he himself had once worked in a cardiac care unit and said his own experiences verified for him the correctness of Cousins' and Lown's criticism of modern medicine's obsession with technology. "It's absolutely true. No attention is paid to any domain but the physical. It's essential that we recognize this, for we do a disservice to our patients by failing to recognize the narrowness of the care we've been giving.

Shelly Greenfield began the discussion by addressing the most innocent and yet most notorious aspect of Cousins' self-treatment plan: his pursuit of laughter. Shelly noted that the salutary effects of laughter and smiling may be even more direct than Cousins had suspected, if we are to believe journalistic accounts of a recent experiment performed by psychobiologist Paul

Ekman and his colleagues. As Shelly and Val Slayton explained, the researchers had instructed subjects to mechanically adopt different facial expressions and then asked them to fill out mood questionnaires. Though they had achieved their expressions by following directions completely devoid of emotional content (e.g. angle your lips x degrees, raise your eyebrows by y amount...), those subjects who formed smile expressions reported that they felt better than other groups. Cousins' emphasis upon pursuing laughter, Shelly suggested, may indeed have had a verifiable neuropsychiatric basis.

Sarah Feldman then noted that Chris, in his introductory presentation, had discussed how the issues raised by Anatomy of an Illness could be viewed from a physician's point of view. She had been struck, in contrast, by the import Cousins' work held for the patient. "I liked his vision of the patient taking responsibility, the patient as captain of his or her own health team." Sarah then posed to the group a fundamental question to which it would return again and again as the evening progressed: "How do you get patients to feel that their illnesses are something they can take charge of?"

"It seems as if the whole health care system as it stands now tries to do the exact opposite," Scott Solomon responded, emphasizing that many features of routine medical practice work to undermine the patient's ability and willingness to assert him or herself. "You stick a patient in a bewildering hospital, take his clothes away, remove him from friends and family, and then you ask, 'Why aren't you taking control of your life?'" The best way to modify patients' acquiescent attitudes, Scott implied, is to first change the dehumanizing aspects of health-care institutions that encourage those attitudes.

"That's a very ideological statement," objected Paul Unger. "Many of these intrusive procedures can be lifesaving...." he began when a seminar member interjected, "But do the patients know that? Are the techniques and the reasons for them explained to the patient?" Replied Paul, "It depends on the health-care provider." This was the very point he wished to make. The faults are due "not so much to the system but to the players within the system."

Ebbie Stewart pointed out that physician attitudes do often frustrate patients' attempts to play a larger role in managing their own health care. As an example, she recalled that when she was in college the university hospital dispensed only one kind of birth control method, birth control pills. In this instance and in many others, Ebbie said, the treatment that a physician prefers may not be the treatment of choice of the patient. "You may go into a doctor's office and declare that you want to try a non-pharmacological therapy and the physician will simply say no." Such physician attitudes, Ebbie argued, grow directly out of the manner in which medical students are educated. "Our training makes us feel certain things have to be done when we are presented with a particular disease."

Lee Learman observed that Sarah's question of how to encourage a patient to become more involved with her or his care "gets down to the individual relationship between patient and doctor. Its up to the physician to determine how much a patient wants to take part in his or her care." He pointed out that a physician should not sit back and wait for a patient to take the first step toward directing his or her own treatment but rather "explain to them that you want to be their ally, shape your style depending on the type of patient to encourage each of them to become as actively involved as possible." Lee also took issue with Paul's contention that individuals, not institutions, are responsible for undermining hospitalized patients' abilities to participate in managing their treatment. A condition of passivity and helplessness "is endemic to being institutionalized. There is simply something about being there, away from your normal environment, stripped of identity, that must cause you to feel you've lost control."

Paul said he agreed with Lee in principle but argued that the situation simply wasn't as bleak as Lee had portrayed it. In the course of his clinical experiences in the last few months as a third year student on rotations, Paul had gained an increasing respect for the indispensability of many superficially disagreeable medical interventions. Addressing a seminar predominantly composed in its student section of members in their second, still classroom-bound year, Paul cautioned, "The procedures are not as senseless as they appear."

"But," Shelly responded, "they can seem senseless to the patient." Medical techniques and devices that strike the seasoned physician as eminently rational can simultaneously appear quite bewildering and frightening to the patient. Shelly delineated the distance between the different perceptual worlds inhabited by doctors and laypersons by describing her own transition between the two in the course of her medical education and acclimation. Last year when she entered hospital wards, "all I could do was react emotionally to the environment, with all the old fears about what doctors were up to. Seeing all the machines without being able to make sense out of them, the apparent lack of organization with everyone running back and forth--it was a very stressful experience." However, when Shelly recently visited the wards again, even after only a single intervening year of medical studies, "There was already a difference. I understood the whys and wherefores a little more. I could see what the physicians and nurses were trying to accomplish."

Paul pointed out that hospital environments need not necessarily appear so confusing and alienating to patients. He had spent the past month with the orthopedic surgery department at Children's Hospital, in which doctors and staff go to

extraordinary lengths to familiarize their pediatric patients with the hospital habitat. Each young patient meets with representatives of all the services which will be involved in his or her care; they explain in detail the procedures they will perform and give the child a pre-operative tour of the surgery room, recovery room and other sites through which he or she will pass. But, Paul acknowledged and Chris Austin emphasized, this acclimating approach taken at Childrens represents an enlightened exception to general practices. Adults, and even most other pediatric patients, are usually left to their own devices in adjusting to hospital life.

Moreover, Sarah Feldman noted that many other factors in addition to that of having to face an unfamiliar environment contributes to the stressfulness of a patient's hospital stay. There are also the simple facts "that you're sick. You're often confined to bed or immobilized. You can't control what will happen to you next and you worry whether you will have a life at all." Sarah observed that "in his account of his illness, Norman Cousins described how he was able to deny such existential fears and overcome them. How can we encourage more people to do that," considering how widely patient's personalities and coping styles vary? Sarah reminded the group of a study presented in the Harvard Medical School introductory psychology course which suggested that cancer patients who are "fighters"--who are often obnoxious and cause the most trouble for their physicians--have higher rates of recovery than those who are more passive and uncomplainingly follow the advice of their doctors--the "nice" patients. In the face of such paradoxes of **personality**, devising strategies of psychological support for patients is a challenging task indeed.

Chris Austin was worried that the tendency of the medical system to narrowly emphasize technological interventions posed an even greater threat to Cousins' and others' visions of a care that embraced the health of a patient's spirit as well as body. "The problem is that at the same time as you see people thrive from the physiological benefits of a massive technological procedure like receiving an intra-aortic balloon pump for heart failure, you'll also find others so demoralized by their experience that they seem to just sit and rot away," Chris said. He then related a **story** from his experience working in an intensive care unit that exemplified the peculiar blindness to patients' emotional turmoil that is sometimes displayed by modern health care systems. A nineteen year old girl had entered the hospital because she had been stabbed by her boyfriend. The girl was very depressed, as she clearly had good reason to be. One of her lungs had to be removed and, following the operation, she seemed to display no will to live at all. She soon required a tracheotomy for a cessation of respiration and, Chris said, "It was almost as if she had refused to breathe on her own."

Though the girl eventually did recover, she had had to spend a long period in the intensive care unit when for all physiological intents and purposes she shouldn't have been there at all. Throughout her stay, no one had ever come to visit her, nor had hospital staff supplied the emotional support she so desperately required. Concluded an indignant Chris, "I can't believe you can't counteract incidents like that. But how? We can talk about it here, about how each of us can retain our sensitivity and compassion, but how do you legislate it? How can you make it part of the system?"

Lee Learman, for one, had more than a few ideas on how to convince the medical powers-that-be that expending the time and resources necessary to improve both patient comprehension of medical procedures and psychosocial support for the ill would be a worthwhile endeavor. For instance, he described a study carried out with surgical patients scheduled for coronary bypass operations. The researchers randomly divided the patients into two groups. One cohort received a detailed and novel description of their operation and their likely post-operative course--they were shown a figure with a number of transparent overlays, each of which represented a different stage in their recovery. One by one the periods were described and overlays withdrawn until at last all that remained was the underlying picture of a fully recovered patient. In contrast, the researchers provided the control group with an equal amount of instruction time, but delivered their explanations in a more informal, unsystematic fashion. The investigators found that the more precisely educated group of patients experienced significantly less morbidity and mortality than the controls. Argued Lee, "This is one way to clearly demonstrate the importance of mind-body interactions in recovery from illness even to those physicians most like to doubt it, i.e. surgeons. Show them it would improve their track records. Prove it rigorously, and then ask them to consider it."

Ebbie Stewart then added that in addition to implementing the sorts of educational and supportive programs Lee had advocated, physicians could make great strides in improving patient morale simply by eliminating many of the annoying, disruptive practices that characterize routine hospital care. A third year student, Ebbie had recently completed a clerkship in gynecology in which rounds were held daily at 7:00 am. She was forced to wake both herself and her patients up before this "ungodly hour" in order to gather the information the physicians required for their conferences. "It would have been much more logical to do this later. I hated waking my patients up, but I had no choice. For no compelling reason, that's the way the system works." Ebbie revealed that when she herself was hospitalized recently, she was glad that she wasn't in a

major medical center. "It was so nice not to be bugged and bothered repeatedly at odd hours." She considered herself "lucky as a patient to escape" the sort of hospital in which she is training to be a physician. Such inconsiderate applications of medical care are carried to their illogical extreme, Chris Austin pointed out, in the all-too-unlikely-to-be-apocryphal story of staff who wake up patients in order to give them their scheduled sleeping pills.

Jennifer Stone then moved the discussion in a new direction by pointing out that while the group had been focussing on the problems of health care providers in recognizing (and promoting beneficial) mind-body interactions in disease, Cousins' book had for the most part been addressed directly toward patients, encouraging them to mobilize their emotional resources and actively confront their illnesses. Jennifer has found this direct appeal a bit unsettling. "Here's a best-selling book in which he presents his way. 'I made it; my plan succeeded. Do this.'--is its implicit message. But if I were ill and reading Cousins' success story and comparing myself to him, I might end up feeling even more inadequate as a patient."

Is Norman Cousins' approach to his own illness a valid model for all people and all diseases? Alan Green hinted at a negative reply when he discussed his own somewhat different experience with a long illness. Having wrestled with a variety of different attitudes, he finally "decided there was simply nothing I could do. And then I could accept my position." Alan thus came to terms with his malady at a different point than had Cousins, and via a different route. Eventually he too recovered, but he added, "I am not sure that anything I did made it get better." A student suggested that perhaps the writing Alan began doing during his illness had helped him gain the more positive emotional outlook Cousins prescribes. Alan agreed that his writing had been beneficial, but emphasized the importance of patient morale from a different perspective than Cousins' focus on the therapeutic powers of positive thinking. "You must learn to live no matter what conditions you're under. That's the kernel of truth in Cousins' writings."

Jeffrey Saver then said that he too had wondered about the general applicability of the lessons Cousins had derived from his personal experience. Jeff had marvelled at Cousins' extraordinary ability to overlook the desperateness of his condition. He worried that Cousins' talent to remain optimistic and even laugh in the direst situation is perhaps not a universal human endowment. Reading Cousins' book might place those unable to easily achieve or maintain such a hopeful outlook in a "Catch-22"--the discovery that their despair was depriving them of salutary psychosomatic interactions would be good cause for plunging even

further into despair.

"Moreover," Jeff continued, "I was worried not only about the possibility, but also the desirability, of seeking the determined and somewhat one-sided optimism that Cousins seems to suggest. Perhaps someone who is very ill should be thinking about the existential issues of life, about how one has lived and about how to confront death." Jeff had been reminded while reading Cousins of William James' distinction between the "healthy-minded" religious outlook and that of the "sick soul." He noted that even in James' day, "healthy-minded" religious movements which retailed an affirming and optimistic view of the world had given rise to "mind-cure" programmes among which, Jeff suspected, James would not have hesitated to classify Cousins' work. And what had James concluded one should make of the irreconcilable conflicts between the healthy-minded and melancholy attitudes toward life? Producing a copy of The Varieties of Religious Experience, Jeff read:

Arrived at this point, we can see how great an antagonism may naturally arise between the healthy-minded way of viewing life and the way that takes all this experience of evil as something essential. To this latter way, the morbid-minded way, as we might call it, healthy-mindedness pure and simple seems unspeakably blind and shallow. To the healthy-minded way, on the other hand, the way of the sick soul seems unmanly and diseased...

In our own attitude, not yet abandoned, of impartial onlookers, what are we to say of this quarrel? It seems to me that we are bound to say that morbid-mindedness ranges over the wider scale of experience, and that its survey is the one that overlaps. The method of averting one's attention from evil, and living simply in the light of good is splendid as long as it will work. It will work with many persons; it will work far more generally than most of us are ready to suppose; and within the sphere of its successful operation there is nothing to be said against it as a religious solution. But it breaks down impotently as soon as melancholy comes; and even though one be quite free from melancholy one's self, there is no doubt that healthy-mindedness is inadequate as a philosophical doctrine, because the evil facts which it refuses positively to account for are a genuine portion of reality; and they may after all be the best key to life's significance, and possibly the only openers of our eyes to the deepest levels of truth.

Concluded Jeff, "I had been bothered by a certain superficiality in Cousins' ideas, however praiseworthy and admirable they

may generally be. The profundity of a fully rounded view of the world was missing, in ways that this passage from James makes us aware." Jeff suggested that James' view that healthy-minded religious outlooks can not, and should not, be universally efficacious holds as well for Cousins' healthy-minded approach to coping with disease.

That not only patients but doctors as well may not find Cousins' approach desirable in all situations emerged from a rapid exchange that next took place among seminar members. "That's very accurate," began Chris Austin. "Our job as doctors is to get someone well and..."

"Stop," interrupted Alan Green. "Are you saying we're not performing our jobs if someone doesn't get well?"

"Well, that's our goal," replied Chris.

"It's self-defeating to take that outlook," Val Slayton objected. "We must recognize that we can't cure everyone and, more importantly, that perhaps we shouldn't try to cure everyone." For example, Val pointed out that terminal cancer patients may be best served not by aggressive hospital-based therapies, but by hospices, or by going home, where they can enjoy their remaining time in relative comfort among family and friends. "But doctors object to this. For those who go into medicine saying their job is to make people better, opting to let a patient go without making every last effort is difficult. Yet that's often the right thing to do."

Another seminar member was concerned lest Jeff's criticism of Cousin's healthy-mindedness be interpreted to suggest that psychological counseling had no beneficial role to play in the life of a severely ill patient. He (or she) pointed out that there are many patients who haven't yet settled into either of the healthy-minded and melancholic categories that James described and who might benefit greatly from psychotherapy. "It's a separate issue for patients who don't know where they stand. They're not melancholy or happy, just scared, lost or victimized. With some direction they could have either the worthwhile experience of being melancholy or take advantage of their potential for psychical healing, depending on their own natural leanings. Psychiatry should not just be rah-rah cheerleading, but rather a way of encouraging people to talk about the issues they face and think them through. And sometimes they will come to realizations--for example, that life was and is worthwhile--and a will to live will be restored to them."

Having thus reaffirmed the benefits of addressing a patient's

spiritual as well as physical ills, the group returned to the difficult problem of finding room for such concerns in the harried and technological environment of modern medicine. Lee Learman emphasized the effect of the structure of institutional demands a hospital makes upon physician behavior. Lee had recently taken a course on patient interviewing techniques and in several encounters with patients had attempted to elicit the whole "agenda of concerns a patient brings to the hospital." Meeting with patients in this setting "seemed wonderful" and he vowed that he would employ the same approach when he goes into the clinic next year. But, Lee added, he fully realized that the interactions he had in the course of these leisurely interviews, when he still didn't know a great deal of medicine, might differ from those that awaited him. "What happens when you're sleep deprived and in a setting where technocracy rules?" Hospital institutions will act, Lee suggested, to suppress precisely the sort of thoroughgoing, personal exploration of a patient's concerns he had found so rewarding. His suspicion was no sooner thus voiced than it was confirmed by Paul Unger, who had already begun confronting the singular challenges of clinical rotations. "Social issues," Paul reported, "sink to the bottom of your priorities."

Tal Laor then moved the seminar toward a consideration of how a physician and patient should ideally interact. She pointed out that "we do often speak of an active patient population who know they have the choice to participate in their care. In actuality, most patients don't recognize they have that opportunity. Someone's got to tell them." A physician should actively encourage patients to collaborate in shaping their treatment. Shelly noted that Cousins said he felt he was going into a "partnership" with his physician. "He wasn't doing it on his own. His backup and ally was Dr. Hitzig," his personal, and extremely understanding, physician.

Chris Austin added that the formation of an alliance between patient and physician was an integral part of the story of Cousins' newest book, The Healing Heart, in which he relates his recent recovery from a heart attack employing and extending the same approaches he developed in The Anatomy of an Illness. Following a heart attack, Cousins was confined to a coronary care unit, unable to repeat his earlier escape from the intrusive hospital environment by repairing to a hotel room. He had to negotiate a great deal more with the attending medical staff. "I don't know if I would have had the forbearance of his doctors," Chris confessed. "You feel like you know so much more than the patient that they should just relax and be passive. Its hard to suppress that and encourage people to be combative with you."

When Chris proceeded to marvel particularly at the patience that senior physician William Hitzig had displayed in working

out a treatment plan with Cousins, a skeptical Ebbie Stewart interrupted: "I would have liked to see how Hitzig acted 30 years ago when he was an overtaxed resident." Chris could not account for Hitzig's actions at the time in question, but he responded that Cousins had written in The Healing Heart about his interactions with an overtaxed resident of present-day vintage. As might have been predicted, when the unstoppable object that is Norman Cousins' demand to understand and direct his own medical care met the immovable wall that is a tired resident's insistence on following prescribed procedures, quite an explosion ensued. The two eventually worked out a compromise and Cousins emerged not only having succeeded in establishing (mirabile a dictu) a give and take collaborative relationship with a resident, but also having acquired an awe for both the rigorousness and the stupidity of residents' schedules.

Allan Hobson could offer a different perspective in responding to Ebbie's provocative interjection. "Thirty years ago I was an intern," he noted. "There's always something you can do, no matter how much is being demanded of you, if you've got down the idea that the patient's emotional well-being is important. I recruited a medical student to live with me during my internship. He slept with me in the hospital. He was eager to become involved with patients; I was overwhelmed. We doubled our manpower, and were more sensitive to and supportive of our own needs as well as the patients'. You can always improvise a solution once you've got that idea." Allan went on to say that he viewed Cousins' book as a "parable." While, at a concrete level, it often seemed implausible or at least difficult to generalize from, it did express two universal truths about mind-body-illness interactions. "First, every individual patient can be helped to mobilize his own curative powers, and must be." Allan emphasized that this prescription held particularly true for chronic, major medical diseases. "With diabetes or schizophrenia, you just don't get well," and it is essential that a patient draw upon his or her natural strengths. "Second, humor is an essential part of the treatment of a chronic illness. It is a glorious psychological defense."

Asked if he would be willing to give The Anatomy of an Illness to one of his patients, Allan replied that "the sort of patients I'd give it to don't really need it. They've already discovered for themselves its lessons. It would be an affirmation." Alan Green said he would be "reluctant to give it to a patient who would take it literally." He worried, for example, about the particular medical therapies that Cousins had advocated, such as megadoses of Vitamin C. But as for Cousins' emphasis upon the therapeutic effects of raising a patient's morale, Alan could "agree from my own experience both as a doctor and a patient that there was much in there that was true and worthwhile."

Sarah Feldman then pointed out that another lesson, one concerning family dynamics, could be learned from Cousins' book. In his last chapter, Cousins related a story concerning a young

woman with a debilitating chronic illness. Her physician asked Cousins if he would call her and try to give the severely depressed girl hope. "One of the psychological problems," Cousins tells us, "was that the entire family was becoming unhinged by worry and despair. Her presence at home...produced an atmosphere of apprehension and distrust." After Cousins called the girl and encouraged her to involve her whole family in an enterprise of discovering humorous stories in which he himself would participate, this family situation changed completely. The girl's relatives were "finding a new and far more pleasant connection" to her and the quality of family relations improved tremendously.

Which is all fine and well if you're Norman Cousins and can lend the aura of your celebrity to a discouraged patient. But what if you're just a Harvard Medical School faculty member or a simple country doctor? This point was raised by Chris Austin when he asked the seminar's faculty members, "How do you in your own practices improve such family dynamics in chronic illness?"

"Magic," replied Allan Hobson. "Be aware of it. You can wield it. Don't be a cheerleader, but you can convince people that all is not black." Alan Green detailed some of the tricks of the trade. "You should make family members realize that there is more to a patient than his or her disease. There's a person there too. How do you do that? It's often surprisingly easy. The family will come to you and say how do we deal with it, with the patient and his illness. And all you have to answer is, 'Live like you always did. Treat him as you always did.'"

Paul Unger then raised a new objection to Cousins' books: their intended audience. "They're aimed at a very narrow spectrum of well-educated, well off people. The situation is entirely different for people with no college, no job to look forward to returning to, no personal physician..." Chris Austin replied that everyone, whatever their socioeconomic and cultural backgrounds, has "things in life which give them pleasure," elements to which one can appeal to buoy their spirits.

But, Paul pointed out, outside of Cousins' books and in the clinics one encounters patients who frustrate such rosy visions of the benefits obtainable through interpersonal exchange. He told of one patient in his care, a Boston Common alcoholic with whom he talked for 4 1/2 hours. "He said he was going to reform, go into a detoxification program. Could I get him into one? I spent hours on the phone with social services arranging a plan. Then we hit a snag and, when I turned around, the guy was just gone." In all probability he never was really seeking help, just 4 1/2 hours worth of food and heat. "I just got really angry, and what do you do with that hostility?"

Perhaps, Sarah suggested, Paul might try viewing this social transaction from a different perspective. "The doctor's role is to heal. And while you didn't arrange a total recovery for this man, simply providing him with a warm meal, heat and your company is in its own way a sort of healing." Paul was not convinced. "But what of someone who you don't make a dent in at all, who seems to seek and waste doctors' time as a habit." What about the opportunity costs involved in spending exorbitant lengths of time with such patients at the expense of others with more tractable problems.

Bill Fletcher agreed that attempts to ameliorate a patient's psychosocial ills can often yield few rewards. He illustrated this point with a story which demonstrated that not only can a "patient who wants to control his own health care be a pain-in-the-ass in the hospital system," but so can one who doesn't. In one of his clinical rotations Bill had taken care of a 37 year old female patient who had been born with a heart defect. "She had spent half her life in hospitals and had the emotional maturity of a teenager. When I'd see her she'd often be in tears. Then I'd sweet talk her and she would become happy and hug me. One day I tried to make her more independent, give her more control over her life and care by getting her to keep track on her own of her medicines and diet. From then on she was always pestering us with questions. I had to spend an extra hour and a half every day there just to deal with her concerns." Bill found little emotional reward in this experience. "Theoretically I could say I was doing her a favor and helping her, but actually it just made her miserable."

"How common are those kind of patients?" asked Chris. He cautioned seminar members not to "make the majority suffer" on the basis of such discouraging anecdotes involving a genuine, but small, subset of the overall patient population.

Allan Hobson agreed. "Don't become cynical just because of one alcoholic. Rather, use that experience to improve your judgement about where to make your investments of time and energy. In the beginning you will be trying all the time and keep on making mistakes. But out of that you will emerge with a sharper sense of where and when you can intervene to do the most good."

Lee Learman offered one final counsel. He noted that Paul and Bill in relating their experiences had stressed "outcomes" rather than "process." Such an orientation in evaluating performance would inevitably lead to disappointment, he warned. "If you want to keep your enthusiasm for ~~your~~ work over the years, you must learn to enjoy the interplay involved in trying to make the doctor-patient relationship and the medical system work,

rather than focussing on results."

Lee's insight suggested one rewarding, final way in which seminar members might profitably view the evening's topic of the interplay of mind and body in illness. Physicians ought to try to improve the emotional and spiritual well-being of their patients not only because such humanistic and compassionate care promotes restorative psychosomatic interactions and results in better recovery rates as an outcome, but also--and more importantly--because simply to enter into such a process of giving and responding to another human being improves the quality of life of both doctor and patient.



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October 26, 1983

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# CROSS-CULTURAL CONSIDERATIONS IN MEDICINE

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Chapter 8  
Cross-Cultural Considerations in Medicine  
Meeting of 26 October 1983

Presenter: Shelly Greenfield  
Host: Scott Solomon  
Correspondent: Linda Leum

"I speak Portugese like a book now, and am ready to converse for hours on any subject. To be sure, the natives seem to have a slight difficulty in understanding me, but that is their lookout, not mine--my business is to speak, and understand them."

Letter home from Brazil, 1865

Shelly Greenfield: The readings for today's session present a broad spectrum of views. They depict the widespread application of the techniques and perspectives of cross-cultural psychology, medical anthropology and clinical psychiatry to fundamental issues in the practice of medicine.

Key issues to consider:

- (1) This topic is important for urban populations, for health care delivery in a multi-ethnic community.
- (2) Both the doctor and the patient are always from their own culture (and in any particular doctor-patient relationship, these cultural backgrounds may differ substantially).
- (3) Mind/body. It is difficult to draw the line between cross-cultural psychiatry and cross-cultural medicine.

Questions:

- (1) How does culture define maladaptive behavior?
- (2) Psychotherapy vs. folk medicine. Does folk medicine play a role similar to psychotherapy?
- (3) Do the patient and doctor have to be of the same culture to be effective?

Who in the seminar has had experiences in other countries they might share with the group?

James Gaudet: I did a fellowship in cross-cultural issues at UCLA concerning community clinics in minority populations, primarily among Blacks, Mexicans, and Asian-Americans.

Jennifer Haas: China . . .

Liz Mort: . . . Haiti . . .

Tal Laor: . . . South Africa . . .

Linda Leum: . . . South Pacific archipelagos.

Bob Goisman: I'd like to recommend another reading for members of the group on cross-cultural psychiatry issues, Persuasion and Healing by Jerome Frank. He defines psychotherapy and describes treatment generally as the relation between healer and sufferer. Psychotherapy is influenced by:

- (1) the therapist as a trained, socially sanctioned healer
- (2) the patient as self-seeking relief
- (3) the structural contacts between (1) and (2) with both believing in the therapeutic nature of the relationship accompanied by words, acts, and rituals of help.

There are two different historical roots:

- (1) from the religious/magical roots of prehistory
- (2) from the scientific/naturalist roots of Mesmer, Freud, and Skinner.

Chris Austin: Last time we discussed the medical culture. When a doctor deals with a patient, she/he comes from a different culture because she/he is an MD regardless of her/his personal culture. MD's become accustomed to illness and see it as commonplace. Do they lose their ability to empathize? Cultural issues go in the same direction but make it more difficult. There remains the need to empathize and reassure the patient and make sure they understand. There is a need to culturally speak the same language.

Allan Hobson: This is a difficult paradox. Special language is necessary for technical competency. This removes us from the cultural assumptions of the patient. We must undo what we learned in medical school. Magic and science. Science confers magic on the physician.

Alan Green: This is the ultimate dilemma. When interviewing a patient who speaks another language (e.g., Spanish), you may get data but not a sense of who the person is. Or when interviewing a deaf patient. Things get lost in the translation. If a patient grew up in a different culture the expression of symptoms may be different. Latin peoples express more physical symptoms. In the U.S., illness is expressed as depression. A Latin person may complain of GI distress and a U.S. American of depression, while they both are actually suffering from the same thing.

Bob Goisman: Consider one doctor treating another doctor. It usually doesn't help. Doctor's don't make good psychiatric patients. There is a false sense of camaraderie, a calling of each other by first names. There is no professional relationship: a doctor assumes that a physician patient knows as much as he does.

Shelly: There is also a difficulty in being of the same ethnic group. You can buy into all that the patient said, not being able to distance yourself from the patient. Must women see women doctors, hispanics see hispanic doctors? Puerto Rican patients tend to see Cuban MDs because they speak Spanish, but there is ethnic tension.

Goisman: There is not a simple relationship.

Scott Solomon: There's a trade-off between professionals relating with patients. Distance vs. being able to empathize by sharing common experiences.

Goisman: Subjects and objects at the same time.

Sarah: Gay patients: If a gay doctor wants gay patients, who's needs is the doctor serving?

Shelly: Do psychotherapists choose their patients? Do they select patients they empathize with?

Green: Psychotherapy is a complicated issue. You want to understand enough to make sense of what's going on. One can read certain cultural subtleties.

James: On the wards, I saw a Chinese woman in the U.S. married to a Chinese-American tried to explain the Chinese culture to her doctor in the U.S. She still had contact with her doctor in China who was sending her pills. It is important for her U.S. doctor to understand her culture and need for Chinese medicinals.

Chris: On rounds, I heard of a Chinese woman's suicide attempt made it clear that we didn't understand where she was coming from. Her relatives were not to know of her attempt. Her husband would divorce her, so she did not want to talk at all. She didn't understand the medical culture--that we needed the assurance that she wouldn't attempt suicide again.

Sarah: There's no reason why someone has to accept the medical culture. The patient has more of a right to not accept the medical culture than we do to not accept hers/his.

Chris: In this case, the Chinese patient who had tried to commit suicide was freaked out by having to eat charcoal, part of the routine treatment in the U.S. for toxic ingestions.

Goisman: Patient religions. We may call it psychopathology and try to treat it. For example, a Southwest Anglo doctor working in a Navajo Indian area was overdiagnosing schizophrenia. He considered the Navajo culture paranoid delusional. He treated a culture with phenothiazines--somehow the culture didn't change. Also in South Carolina there are settlements from West Africa. One patient there complained of a voodoo spell. Diagnosed as paranoid delusional. A fight with his former girlfriend who threatened him with a hex. He was paranoid but not psychotic. People die of voodoo death.

Hobson: I have a patient with evil eye. I treat her with a Jesuit priest who agreed that her behavior was maladaptive. He acts as a cultural broker.

Scott: Maybe we can clear the mental hospitals by finding a culture for the patients to live in, as in The King of Hearts.

Hobson: Schizophrenia as culture, not as culturally determined.

James: Folk healers don't view mind and body as separate. There's lots of somatization.

Goisman: We are deviant because we have separated mind and body.

Hobson: The medical culture perpetuates this schism.

Shelly: Cardiac neurotics are sent to psychiatrists.

Sarah: Many things we learn are based on emotion, releasing catecholamines. So our education does relate the mind's thoughts and feelings on one hand and the body's physiological changes on the other.

Shelly: We should say that the person is somatizing their problems and needs other care. They should not be dismissed because they don't have the proper symptoms. Pain deserves to be treated.

Sarah: A patient presenting with labile hypertension is acceptable because we can treat it with drugs.

Hobson: If we are incompetent, it's the "patient's fault."

Jeff: Margaret Mead in Samoa. Work done to disprove biological determinism but also trying to disprove psychoanalytic universality. Can one go from a Western culture to another culture?

Hobson: Has anyone been sick in a foreign country?

Sarah: In France there is socialized medicine. Meds are given liberally. The doc made a house call on Sunday to see me and gave me lots of ulcer medication for a virus I had.

Linda: While living in a fishing village in Polynesia, I developed an ear infection. The village headman treated me by chewing on breadfruit stems and spitting them into my ear. I don't know if it worked. I started putting drops in my ear that I had brought from the States. The pain was getting severe and I trusted the meds more than I trusted the breadfruit.

Green: I had gastroenteritis in Columbia and wanted tetracycline. There is lots of out-of-date tetracycline there. It damages your kidneys. Either it had been shipped down by American companies or it had just gotten old in Columbia.

Scott: Meds not approved by the FDA are also sent to developing countries.

Tal: In South Africa a colored woman wanted western meds for TB. Another woman wanted western meds, was given aspirin; she went home and buried it under a flower pot.

Jennifer: I worked in a psych clinic in China where they gave western drugs for any sort of pain. The Chinese have a strongly developed medicine of their own (herbal). There are few inpatient psych facilities and many very disturbed people. There are also fairly normal people going for electroshock and insulin shock therapy. I was an attraction. People stared at me. The patients were interviewed in masses. Others would comment on the person's symptoms, illness as a matter of social event.

Hobson: Everyone may share the same secret. The social aspect of psych treatment in China may alleviate the mystique that your problem is unique.

Goisman: In Puerto Rico--ataki . . . is a time limited rage attack from rejection in a relationship. Sometimes the rage attacks were actually temporal lobe epilepsy, not just a cultural problem. Therefore we were underdiagnosing a treatable problem and doing a disservice.

Shelly: We musn't stereotype people according to culture and not pay attention to the individual.

Green: A woman received disappointing news in a public office. She fell to the floor shouting Hallelujah. Shaking, eyes rolling, unresponsive, shouting Hallelujah, totally unresponsive except to deep pain. When the local EW doctors heard this story, they immediately sent her to a nearby psychiatric hospital. The psychiatrists noted that she was feverish . . . 102/5 temp, thought perhaps she had meningitis. The psychiatrists were the ones who thought to get a white count and urine, . . . and it turned out she was having an hysterical episode.

Goisman: Truth serum in World War II vets who watched buddies get blown up. It disinhibits them so they can talk about it. It's used in catatonic patients or mutes. Once it cleared the system, they went back into catatonic state.

James: It is culturally expected for women to have ataki. You "don't care" if you have ataki at a funeral.

Hobson: Religious experiences. Cambridge street pentecostals. Group learning problems where states are induced . . . so you show that you have received the spirit . . . it is a rite of passage into spiritual maturity.

Liz: In Haiti I learned a bit about zombies. These people are given a vodoun powder, kind of a magical mix of plant toxins and other substances, that leaves them paralyzed. They appear dead, even to trained eyes, and are buried only to be unearthed and then subjected to a lifetime of slavery. It's not clear to me who is selected to be a zombie. Some people told me you can sell yourself into zombidom, others say some people are just innocent victims of the vodoun practices. The beliefs permeate through all levels of society. It's very real. People have a tremendous amount of fear around the whole issue of zombies.

Hobson: Makumba in Brazil has 20 million followers and is growing. . . . Lots of candles, bones and rituals.

Sarah: Planned Parenthood in Trenton. 10-12 year old mothers. I became accustomed to young mothers. The New York Times had an article on girls in the South Bronx having kids and going on welfare. I accepted it as normal. . . . People are allowed to have their own beliefs. We should be careful to maintain our own concept of what is right and wrong.

Chris: The Times had an article on "zombies." After selling their soul, they are given tetrodotoxin to induce the zombie state, then given hallucinogens (see Schultes book, Plants of the Gods).

Seminar Member: In Africa, witch doctors would examine patients, do incantations and would recognize those patients in need of surgical treatment and send them to the Schweitzer hospital. The witchdoctors' secret: use one's own influence, power of conflict, persuasion, "placebo effect," "placebo is the doctor that resides within us." The witch doctor activates the doctor that resides within.

Liz: Even when we have a firm grip on the chemical composition of the vodoun powder, we will have only scratched the surface of the zombie story. There is a botanist from Harvard in Haiti now doing research on the whole process. Haitians I spoke with have convinced me that vodoun practices are an intricate and powerful force in their society.

Shelly: The evil eye is big in the Middle East. Doors are painted blue to ward off the evil eye. Middle Eastern Jews who have emigrated to Israel say the Morrocco demon causes illness . . . and there are demons in Morrocco but not in Israel.

Jeff: Should Western medicine incorporate folk healers?

James: In L.A., there is a growing explosion of community clinics who list names of local healers. Good folk healers don't go against western medicine. They help therapy, they have more time to socialize, massage, etc. The patient feels better due to the social context.

Jeff: Western medicine and folk healers may oppose each other. We may perpetuate folk myths by using them in Western medicine.

Hobson: Perhaps we should use folk medicine. We spend too much time fighting it.

Chris: People go to doctors who aren't doctors in India. I heard of a child with diarrhea who was taken in a back room by a folk healer. The diarrhea stopped but the child got very ill over the next few days. The folk healer had put a bar of soap up the child's rectum. If we put too much credulity on folk medicine we may perpetrate malpractice.

Sarah: Beliefs of folk healers are different than quacks. There are strong cultural beliefs that affect health.

Shelly: Science may just not have caught up with their methods; hormonal and neural. . . . Folk medicine knows that something works--we just don't have all of the explanations yet. Even if we don't understand it we can still take advantage of folk wisdom.

James: What is the cost if we don't take advantage of folk medicine?

Hobson: Many people get high bills but no relief from western medicine.

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November 16, 1983

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NATURE VS. NURTURE,  
OR  
WHAT MAKES  
RIMA THE BIRD-GIRL  
FLY?

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## Chapter 9

Nature vs. Nurture, or What Makes Rima the Bird-Girl Fly?  
Meeting of 16 November 1983

Presenter: Elizabeth Stewart  
Host: Sarah Feldman  
Correspondent: Jennifer Haas

"In every concrete individual, there is a uniqueness that defies all formulation. We can feel the touch of it and recognize its taste, so to speak, relishing or disliking, as the case may be, but we can give no ultimate account of it, and we have in the end simply to admire the Creator."

Memories and Studies, 1904

The November meeting of the William James Seminar--Cohort 1982 was held at Sarah Feldman's apartment. Attending the session were: Chris Austin, Dan Barboriak, Sarah Feldman, Shelly Greenfield, Bob Goisman, Alan Green, James Gaudet, Jennifer Haas, Allan Hobson, Anya Hurlbert, Tal Laor, Lee Learman, Linda Leum, Liz Mort, Jeff Saver, Val Slayton, Steve Stelovich, Ebbie Stewart, and Jennifer Stone.

The topic for discussion was "Nature vs. Nurture, or What Makes Rima the Bird Girl Fly?". The discussion was focused around three articles: "Rima the Bird Girl," a story by Rona Jaffe portraying the drastic shifts of personality of a young woman as she tries to fit herself to an image which she thinks the man she is with would like best; "Maternal Bonding in Early Fetal Ultrasound Examinations" which raises the question of accelerating the bonding process when it is possible to view a fetus by ultrasound during the first trimester; and "Effects of Prenatal Sex Hormones on Gender-Related Behavior" which summarizes what is known about the influence of prenatal sex hormones on sex-dimorphic behavior.

Ebbie Stewart opened the discussion by presenting her interest in the topic. She is intrigued by the process of the development of individual personality--how is it that the mixture of genes, hormones, parents and experiences makes a person unique? She recounted a story which sparked her curiosity. When she was in second grade she had problems with spelling. One day, as her mother was concernedly testing her spelling skills, Ebbie replied, "I'm not going to have to know how to spell. . . . I'm going to be important and have secretaries." Why did she say this? Was it her "nature"? If not, what was it that had influenced her that had brought her to this conclusion? (At this point Allan Hobson interjected, "So how do you spell secretary?") Ebbie then presented some questions that the discussion could be focused around. She felt that this topic could lead us to consider social interactions. What are the differences between men and women? Can there ever be a meeting of the minds between them? What are the political implications of gender specific attributes? Does society channel women into lesser paying jobs or do women choose not to become truck drivers? Ebbie also introduced the articles she had chosen. She noted that many people would contest the material presented in the article on prenatal sex hormones but that the potential impact of this area of research on what is known about development is immense. The ultrasound article points out that nurturing can go on even when we aren't aware of it. If ultrasound enables one to respond to a baby earlier, will this change in nurturing affect the person that the baby will become? Ebbie explained that she hoped that the Rima story would enable us to examine the process of the development of the person from a literary perspective and to draw examples from outside of our personal experiences. She then raised the question of whether or not any of us could imagine a male Rima.

Chris Austin pointed out that the topic of nature versus nurture has been highly susceptible to fallacies of all kinds. For example, humans assume that they are different from other animals, but this is an artificial distinction. We believe that other animals exhibit sexually dimorphic behavior, but that humans can out-think their hormones . . . the cortex governs all. Chris noted his dissatisfaction with lectures on the hormonal control of behavior--when they get to human behavior they admit that hormones are there but they put human sexual behavior above this. Humans do as they like.

Shelly Greenfield pointed out two problems in studying hormonal and genetic effects on human behavior. She pointed out the shortcomings of extrapolating animal models onto people. When people study animals, they take their own societal models with them. People aren't objective when they study animals. She raised the example of primate behavior research which initially concluded that there are only fixed male dominance hierarchies. But when later studies by women scientists looked for behavior patterns not extrapolated from male conceptions of human society, they found that there are primate female dominance hierarchies as well. Shelly also pointed out that studies of hormonal and genetic effects on human behavior examine deviations from the "norm" of human society. She emphasized the danger of judging everyone by a male, heterosexual standard. It is difficult to avoid unrecognized biases in human studies.

Sarah Feldman noted the bias of the language that we speak. Each language puts people into categories which determine the perceptions of the people that speak and think in it. She explained that in an African language there are no separate words for boy and girl--everyone is thought of as a child until they reach puberty. One couldn't ask people who speak this language to differentiate on the basis of boy and girl. Sarah also shared a realization that she had had last year when she had seen a woman with Turner's Syndrome in a class clinic. She was struck that this woman had not been able to develop a sexual identity because she didn't really have a gender identity. This emphasized to Sarah how important it is in our society to identify yourself either as male or female.

Bob Goisman responded to Shelly's warning on the bias of studies dealing with sexually dimorphic behavior by sharing a study he had seen. The study asked people to list the most desirable traits of men, women and people. The lists of traits for "men" and "people" were virtually identical, and both were different from the desirable traits of "women."

Lee Learman questioned if this was a study given only to men.

Ebbie raised the example of the anatomy books that are filled with pictures of the male inguinal region yet have a single picture of the female. It really makes one realize that the standard is male.

Shelly added that medical education is based on the 70 kg. man--all women are congenital anomalies.

Chris was disturbed by this criticism of medical education. He agreed that this criticism was correct in spirit but that the breadth of medical education creates a need to standardize what is taught.

Shelly pointed out that women are 50% of the population. It's bad teaching and bad medicine to ignore half the population. How can we only be taught about hormonal imbalance in males with cirrhosis?

Lee added that the lecturers at medical school don't care if they're caught without an answer to questions dealing with women . . . they just assume it's a stupid question.

Anya Hurlbert stated that in her endocrine course they were told that female hormones are too complicated to teach.

Jeff Saver turned the conversation from the shortcomings of medical education to an examination of personal development. He asked how we came to realizations about our "self" and sexual identity.

Ebbie noted that if you are female there are presupposed differences. She then asked, if you were a member of the opposite sex, would you be the same person?

Allan Hobson encouraged the group to think of childhood memories--when we first realized our sexual identity (male or female) or more generally when we realized we were different in many ways from others.

One student bravely attempted to define this for himself. He noted that there is a wide spectrum of people of both sexes with some overlap. He would like to think of himself as a person first, but he feels that he cannot understand some things about women. He had once seen a newspaper story about a woman who tossed her baby out of a burning building. He showed it to his male roommate who laughed. . . . He realized that a woman wouldn't laugh, but he still doesn't understand why. He realizes that men and women have very different perceptions of violence. Even though politically he doesn't agree with war, there is a certain amount of glamour that he can appreciate in it.

Lee asked if this sense was learned or innate. The student replied that he wasn't sure.

One seminar member shared that when she was little she really wanted a boy's name, Steve. She realized the power of having a boy's name. She remembers being embarrassed when someone told her mother this. The seminar member also recounted an experience when she had been working in an office. She was taken aback by one of the men who was exceedingly aggressive. She then questioned her own aggressiveness. Someone pointed out that she was just as aggressive but that she pretends to be a meek female.

Ebbie questioned if this quality had anything to do with physical size or strength.

Linda Leum mentioned a canoe trip she had taken that made her realize that men are physically stronger. She had discovered that it was a much better allocation of resources for her to collect firewood. She realized that she had fallen into a traditional role that she didn't think she would assume and this had made her accept that there is a natural division of what men and women do best.

Jennifer Haas questioned that perhaps she would be able to do less traditionally female activities if she had been raised differently.

Shelly questioned why more value was placed on a male role vs. a female role.

Allan Hobson thought this had developed since in primitive time men were more in control of the environment.

Ebbie interjected that the men couldn't have survived without the women doing their tasks.

Allan replied that the male role seemed more important on a global scale.

Chris added that perhaps he meant "glamorous" and not "global."

Jeff noted that given different physical builds there seemed to be payoffs of specialization of male and female working roles to the survival of the species in early evolutionary eras. But do male-female emotional differences also have a payoff?

Ebbie moved the discussion back to Rima to explore this question. Are there men who mold their personalities to women? Is Rima the prey of men or is she manipulating men?

Shelly replied that the structure of society was written into that story. Economically and socially Rima was driven to certain roles. Shelly noted that the story also reminded her of the movie "Zelig," in which Zelig assumes the identities of people around him. But Zelig took on anybody's character to fit in. Rima only adapted herself to certain men.

Sarah noted that when she read the story she fell into the trap of thinking that it was only women who did this. But then she realized that the only person she knows like Rima is a man. Rima is the story of a disturbed person, not a man or a woman.

Bob added that Rima's personality is the precursor of the borderline personality, the "as if" personality. He noted that studies have claimed that there are more "as if" women than men.

Steve Stelovich noted that he has always been amused by people who come to look like their pets.

Allan gave the example of a seminar he had just come from. Seven people were present; there was one woman and she didn't say anything. They were discussing the process of psychotherapy and the difference between association and empathy so that the patient can make an identification. Is this plasticity essential in a therapist? Allan noted that this aspect of the therapeutic process is exciting. As the therapist's personality moves closer to the patient they agreed that there is fear and excitement. Here were six men agreeing that it is important to be plastic.

Bob responded that it is interesting that psychiatry and psychotherapy are branded as feminine fields.

Ebbie questioned if in our society men become psychiatrists and women become borderline patients.

Jeff asked if male therapists have more trouble molding themselves to women patients.

Allan replied probably not.

Alan Green added that he was also at that meeting. He described men that he has known that seek out a certain kind of woman when they want to establish that identity.

Steve made reference to Don Juan becoming the man that he thinks the woman would want him to be to carry out his seduction.

Alan Green replied that was for a purpose, not to borrow a personality.

Liz Mort questioned what it is that happens so that your personality becomes plastic.

Sarah mentioned a New York Times article on child development. It described how parents learn not to pick up children who are supersensitive to touch. She wondered if there is some genetic predisposition or hormonal factors that cause parents and children to interact.

Steve responded that we shouldn't look at this as a question of either/or. It's absurd to think that what we are isn't due to the contributions of many things.

Sarah wondered if there is one factor which came first.

Steve replied that genes must have an environment, both hormonal and social. He continued by explaining that in general his interactions with HMS as a student were a disaster. However, he had already told the seminar at an earlier meeting of one of the brief flashes of education he did have there. In pharmacology, some students were injected with a drug and had to figure out what it was. After his injection he felt like there was an earthquake and then he felt as if something terrible were about to happen--then he realized he had been given epinephrine. If he were always hyped up with adrenaline, how would he interact? If tonically elevated levels of adrenaline led him to flunk out of medical school and lose his self-esteem, what would be the responsible factor? His physiology? His psychological makeup that determined how he coped with/expressed his altered physiology? Or the institution which could not tolerate/adapt to his altered behavior? What do drug experiences mean in a social context? And what if your experience was like that all the time--would you come to resemble psychotic patients?

Val Slayton wondered how wide-reaching the effects of sex hormones are on in utero development. Do these hormones set up a dimorphism of brain function (i.e., women have greater verbal ability and men better spatial reasoning)?

Chris remembered a lecture on a hyaline membrane disease that he had heard. Why is it that female fetuses make surfactant better than male fetuses? What distinctions can you make between the lungs and any organ?

Sarah noted that hormonal differences are deterministic and provided the example of premenstrual syndrome. She noted that when doing counselling and asking if a woman was depressed before her period, it would make a woman feel better to realize that there might be a physiologic cause of her depression. Otherwise one winds up incorporating hormonal changes as personality problems.

Chris responded that just because you might know why you are depressed doesn't mean that you aren't less affected when you have your period. Women have to deal with it . . . it doesn't matter if they just realize it.

Jeff mentioned mentioned the cognitive school of depression theory which emphasizes the ways in which depressed people perceive the world differently than those who are normothymic.

Chris reaffirmed that it isn't the differences between males and females that are wrong, but the values that are placed on these differences. He realizes that he experiences something qualitatively different in talking with a woman than with a man. He is upset with people when they say there isn't a difference of perspective.

Ebbie continued that if we admit that there are differences, how does this affect our lives? If we are all interested in going into residency programs and in having children, certainly it is much easier for men to do this. Women have biological problems. And no one is really accommodating to changing the system. Conceptions of work and commitment to work are pretty fixed. Taking time off to raise kids isn't considered as a growing experience for men and women.

Bob noted that paradoxically it is more acceptable for a woman to take time off to raise a baby. Men are not given the opportunity to make the choice. Who is really getting the better shake?

Shelly responded that the power of biology still works in favor of men in the medical profession.

Alan Green gave an example from his own life. He went through medical school, a residency program, and established his career and still has the flexibility to have children. If he were a woman this wouldn't be true.

Chris added that this is probably easy to solve. There was just never a demand for a change before.

Alan Green pointed out that it might not be that easy to change. People resent extra nights they have to spend on call while someone is sick or having a baby.

Lee noted that half-time residencies might be a solution.

Shelly questioned that if a woman starts a full-time residency she is signing a contract that she cannot get pregnant for three years. Men can have children while doing a full-time residency.

Ebbie noted that there is a difference between a woman who becomes pregnant during a residency and a man who becomes ill.

Steve said that this is not true. He gave the example of a resident that he knew who had a brain tumor. At first people were very accommodating but then . . . It's a matter of work. People don't like to work harder.

Chris suggested that they could try scheduling pregnancies. But he realized that our society would not accept being told when it is your turn to have a baby.

Jennifer Stone noted that perhaps they should create more residencies.

Bob noted that this idea is discordant with the competitive spirit of Boston residencies.

Jeff questioned if this is a problem of institutional structure or of latent attitudes. If a woman takes time off and goes through bonding with her child, does she want to go back to work? Is there a difference between men and women who do this?

Shelly felt that there is a problem with the structure. When she decided to go back to medical school she quickly planned away ten years of her life. If one were to rearrange the structure based on a woman's biology one could have kids in your twenties and then go to medical school. But that's not reality. Also, if you're expected to work 120 hours a week that more or less assumes that there's someone at home paying the bills and cleaning.

Chris replied that this isn't true. When his father did his residency he would have been thrown out if he had gotten married.

Sarah added that when her mother did her residency it was her father who took care of her (Sarah) at home.

Shelly returned to trying to define the difference between men and women. She believes more in nurture than in nature. Chris questioned why it's necessary to define the difference. Nature-nurture is interesting, but why does it have to be solved?

Allan Hobson commented that it is important to separate the effects of nature vs. nurture to bring about social change. You don't want to push the social system past biology. Qualification is important--we're all involved in a social experiment.

Sarah noted that the difficulties in biological timing in the American medical system result not because it was created just for men but because it was designed to train people who had already had the privilege of acquiring a broad educational perspective in a liberal undergraduate curriculum. In France, where people go to medical school right after high school, women don't have the same problems.

Bob replied that Sarah was implying that there was a set of trade-offs here. What should be sacrificed?

Ebbie noted the gains of women in the past fifteen years and she wondered if men also have more freedom in their lives.

Allan Hobson replied that it is extraordinary what freedoms people have gained.

Bob noted that he was able to take 2½ weeks off after his baby was born with no questions asked. He feels he wouldn't have been able to do this 10 years ago.

Jeff noted that over the past ten years in general males have newly acquired the freedom to act more "female" and to express emotions that they weren't able to before.

Val added that he feels a lot more flexible not to be competitive. Five years ago he was concerned about where he was going in his life, but now that he's married and thinking about raising children he realizes that he is where he wants to be. Medicine doesn't seem as important to his own life.

Jeff noted that there are male Rima's--they mold themselves to become hard-driving physicians.

Bob questioned if it is worse to be a man with goals that he cannot achieve or a woman raising children. The woman would still be alive; the man might kill himself.

Allan Hobson expressed his concern for the high goals which people in the medical profession often set for themselves. He tells the story of someone who completed a residency at the MGH and then killed himself because it wasn't what he thought it was.

Ebbie wondered if men have more trouble when they fail and women have more problems when they succeed.

Allan Hobson noted that advertisers have realized that a mixed market strategy is best.

As the meeting drew to a close, members agreed they had not yet explained just what makes Rima the Bird Girl fly. However, the discussion had delineated some of the boundaries of nature versus nurture in terms that were familiar to all of us.

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December 7, 1983

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# THE MINDS OF ANIMALS

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**Chapter 10**  
**The Minds of Animals**  
**Meeting of 7 December 1983**

**Presenter:** Val Slayton  
**Host:** Dan Barboiak  
**Correspondent:** Jeffrey Saver

"Probably a crab would be filled with a sense of personal outrage if it could hear us class it without ado or apology as a crustacean, and thus dispose of it. 'I am no such thing,' it would say, 'I am MYSELF, MYSELF alone.'"

The Varieties of Religious Experience, 1902

When future historians sit in judgement upon the intellectual life of the twentieth century, surely they will find few of our age's enthusiasms as bizarre and as inexplicable as our longlasting attempt to banish from serious discourse the very notion that non-human creatures have subjective experiences, are self-aware, feel emotions, think, create--in short, that animals have minds as well as brains. Fortunately, psychology, neuroscience, and medicine have now awoken from the long sleep and odd dream of radical behaviorism, with its puzzling formal elements (most especially its *a priori* requirement that behavior be explained without reference to mental events), and its resulting distortion of genuine experience. In our day, not the existence, but the nature of animal consciousness is the issue that attracts scientific attention; and the further question of what rights and duties we owe the members of other species, no longer considered mere machines, has been made urgent by a rejuvenated lay antivivisection movement. At previous meetings on other topics, the members of the seminar have emphasized the importance of introspection as a road to discovery. Attending to the events in one's own "mental realm" can prove a rich resource for generating and testing scientific hypotheses about human mind-body interactions, for better understanding and treating the complaints of patients, and for comprehending and adapting to the process of our own professionalization. At this meeting, seminar members turned to consider what is perhaps the greatest challenge for would-be advocates of a science of introspection--determining the existence, nature and rights of The Minds of Animals.

As background reading for the meeting's discussion, members had read selections from the writings of the most penetrating proponent of the study of animal awareness in present-day biology, the ethologist Donald Griffin, and a far-sighted, nineteenth century predecessor, one Charles Darwin. The Darwin excerpt was taken from the "Special Expressions: Monkeys" section of The Expression of the Emotions in Man and Animals. Here Darwin describes in loving detail the facial, bodily, and vocal emotional expressions employed by a variety of primate species to convey different "states of mind": joy and affection, pain, anger, and astonishment and terror. Darwin concludes, "He who...will watch the countenance of a monkey when insulted, and when fondled by his keeper, will be forced to admit that the movements of their features and their gestures are almost as expressive as (and often uncannily alike) those of man."

Griffin, in an review entitled "Prospects for a Cognitive Ethology", surveys a wide variety of recent studies in ethology and comparative psychology of complex animal behavior patterns--social behaviors, discrimination learning, communication behaviors. His article is a powerful brief for the view that animals can create mental representations of objects and events remote from the immediate stimulus situation, may form intentions concerning future actions, and do possess self-awareness.

Moderator Val Slayton launched the meeting by presenting several stimulating episodes from the past and present history of the study of animal awareness for members to reflect upon as the discussion progressed. His first "snippet", however, was a fable he attributed to Chris Austin. Once upon a time, he began in the time-honored manner, there was a quiet, little tic who took it upon himself to climb onto an outcropping of rock that arched over a well-used path, and waited and waited and waited. Before proceeding, Val noted that there are two versions, two ways of telling, this story. He then related version A: a set of sensory neurons within the tic CNS respond to an airborne chemical stimuli (odor), the cells fire-releasing the organism's reflexively maintained grip-, then a tic tactile sensory center is stimulated by contact with animal fur and releases a fixed action pattern resembling digging. The end. Val next told version B: a small tic sees a dog or cat walking by, decides to drop off its perch onto the animal, and then burrows into the animal's back and is carried away. The end. The moral of Chris and Val's fable seemed to be that, even in lower organisms, doubts may often arise as to what level and type of phenomenologic description accurately and fully describes an animal's behavior and internal experience.

Val then reminded the seminar of that quintessential cautionary tale that has warned off several generations of psychologists from the study of animal intelligence and awareness, the story of clever Hans. When presented by his owner with a mathematics problem, e.g.  $6 \times 3$  or the square root of nine, clever Hans, a horse, would "stamp, stamp, stamp" until he had pounded out the correct answer. The infallible horse and his owner became celebrated figures in their day. A number of the leading psychologists of the period observed and investigated their feats. Only after several years did the true mechanism of clever Hans' astonishing ability become apparent. It was finally realized that clever Hans' owner, consciously or not, would make the minutest of movements whenever his horse had arrived at the correct solution, and clever Hans would invariably respond to this signal by ceasing to be active. Noted Val, you must attempt to minimize or completely dissect away the effect that human observers, wittingly or unwittingly, have upon the experimental situation in the study of animal cognition.

Val lastly discussed recent research examining the ability of primates to employ symbols to represent objects and occurrences in their world. In one study, elaborate training procedures enabled chimpanzees to correctly class a familiar set of geometric symbols representing food and tool items into functional categories. When

subsequently presented with novel stimuli, to the investigators' surprise, the chimps were able to correctly classify the new symbols, suggesting they did possess "referential capacity." Val followed this example with a brief overview of the attempts made, particularly in the 70's, to teach chimpanzees and gorillas sign language. He reviewed the spectacular linguistic achievements, and failures, of those animal celebrities of our own day, Washoe (vocabulary of more than 200 signs), Koko (345 sign working vocabulary) and Nim Chimpsky (125 sign vocabulary). The group found particularly thought-provoking the numerous excerpts Val read from published transcripts of man-monkey conversations.

Val's concluding introductory questions for the seminar were: What criteria, if any, could we ever use to determine whether or not an animal has a mind? What are the ethical obligations involved in our use of animals for experimental purposes? And is "thought", as some philosophers have maintained, inseparably bound up with complex language use, or may it be said to exist in settings of non-verbal representational processes and less complex communication systems, as in animal minds?

Bob Goisman, reflecting upon the diverse dialogues Val had presented between Washoe and Koko and their human caretakers, responded first. "I don't know how rigorously I could test it," Bob observed, "but on an intuitive basis the animals' signed messages seem to serve all the functions that language serves in human communication." Nonetheless, he thought we must be cautious in inferring from this resemblance that the mental apparatus subserving the monkeys' simple linguistic behavior is precisely analogous to that which underlies human verbal communication.

Val asked Bob, a recent (and deservedly proud) father, whether his 10 and 1/2 month old son had begun at all to employ language. Some researchers on sign language in primates, Val noted, have suggested that the pattern of language acquisition their monkey subjects display follows the same developmental scheme Piaget had described for human infants, but then is arrested at about the stage of a 1 and 1/2 year old child. Bob's response reminded seminar members that parents of newborn children are remarkable field naturalists. He reported that his son had just 4 or 5 weeks earlier begun to emit one syllable phonemic units, starting with "ba" and accelerating rapidly to the dizzying heights of "ga", "da" and similar phrases, without yet venturing upon the perilous territory of other vowel sounds such as "ih" or "eh". As he becomes more competent, he is speaking more loudly, initiating interchanges more often and improving at repeating phonemes that Bob initially provides. While he has not yet put two of these phonemes together to form a larger unit, he does have different affects and employs different intonations when pronouncing the same syllables in different situations. Bob thereby receives the impression that his son is communicating on some level of meaning, that his syllabic output is meant to convey different messages at different times.

None of us, Val ventured, would dispute the claim that a human infant is aware, has a mind. Would Bob dispute it? (Bob chuckles inscrutably.) Allan Hobson asked Val to define "mind" before requiring an answer from seminar members on so thorny a question. Val noted that to reply directly would run the risk of starting an endless definitional argument and instead offered the following perspective. Assuming that adult humans have minds (no one objected to this assumption), then either infants are born with a mind or develop one. If we further assume the latter, exactly what criteria do we use to determine when they have developed one? And if we can find animals cognitively functioning at that very same level, is this sufficient evidence for concluding they too have minds, at least at that perhaps still somewhat primitive level?

"Let me ask a dissenting question," Bob interjected. "Why is it necessary to decide whether something has a mind or not?" He did not ask this just to be provocative, he added, but because he sometimes genuinely felt that arguments about "the existence of mind" simply lead nowhere. (To use James' phrase, they have no "cash-value".) What you're really interested in, Bob observed, are certain functions the central nervous system carries out. They are observed to take place in fully grown adults; do they occur in infants or non-human animals?

Steve Stelovich then suggested that, although discussions of the definition of mind and of how to test for the presence of mind in another being may become at times arcane, infuriating, even fruitless, important ethical issues hang in the balance. If animals do possess certain levels of awareness and consciousness, then the members of other species may indeed be entitled to correlative moral consideration. He reflected, "If I were to go through medical training again, I would refuse to do experiments that I did as a student in medical school. I would refuse outright." Bob responded that he "would not disagree with any of that", that he shared Steve's concern for the legitimate rights of non-human animals. However, he was not sure our moral concern for other beings follows or should follow from the question of whether they have "minds." Steve cautioned, however, that failing to attend to the issue of the extent and limits of the minds of animals meant risking that one would offhandedly slip into an unbridled mechomorphism. All too often men have been tempted to say, "well, animals don't really have minds; they don't think. And consequently you can do anything you damn well please with them."

But, Alan Green pointed out, the question still remains: what's the cutoff point for determining whether an animal, or an infant, is the possessor of a mind, with all its attendant rights and duties. "Do all living things have minds?" Does, for example, *aplysia*--that leech on the minds of the entire present-day generation of neuroscientists--have anything akin to what we would call mental experience? Alan had a few days earlier participated in a discussion of a recent paper by Eric Kandel with a group of research and clinical psychiatrists. Kandel suggests that single neuron facilitation may provide an appropriate molecular model of anxiety

states in man. Can one legitimately make such comparisons across so many levels in the biological hierarchy?, wondered Alan. Are events at a single synapse in the behavioral conditioning of Aplysia organisms directly relevant to anxiety conditions in man, in all their phenomenologic fullness and variety?

Steve Stelovich reminded the group that there is a whole school of psychological thought that claims human beings themselves don't have "minds". This is the outlook taken by those who push the behaviorist injunction against postulating the existence of unverifiable mental constructs to explain observed behaviors to its logical extreme. Bob Goisman, the group's resident faculty member with roots in the behaviorist tradition, could no longer contain himself. "It really nags me," Bob declared, when people take behaviorism to stand uniformly for the denial of the existence of mental processes. He objected to Griffin's "scurrilous attacks on behaviorism." We must not confuse methodological behaviorism, Bob argued, with radical (or ontological) behaviorism. The former only asserts that behavior may profitably be studied by examining scientifically definable, measurable, and replicable properties such as stimulus and response. It does not in principle deny the occurrence of internal events in an organism's brain and mind, but merely acknowledges their refractoriness to scientific analysis. Similarly, the behaviorist clinician often achieves remarkable results in helping patients with phobias and other psychiatric illnesses by directing treatment directly toward disabling symptoms, recognizing, but not becoming sidetracked into endlessly exploring, the internal belief system that mediates the outward behavior.

Alan Green next returned the discussion to the question of the dividing line between mind and not-mind, mindfulness and mindlessness. He felt that Griffin in his review had offered a very reasonable alternative to the two extremes of either advancing the pantheist claim that everything has a mind or attempting the impossible task of precisely distinguishing those creatures that do from those that don't. Alan was attracted to Griffin's notion that there is a continuum of mental experience in nature. As one ascends the phylogenetic scale or observes the development of the human child, one encounters gradually increasing levels of complexity and subjectivity, more powerful internal representations of the external world, without sharp discontinuities that would allow one to say, on this side is matter, on that mind. But, Alan wondered, how do you apply a language framed by human experience to describe various lesser, circumscribed and sometimes simply different gradations of mentality? "At what point do Allan's cats (the subjects of the Laboratory of Neurophysiology's investigations into sleep and dreaming), for example,..."

"You have to have a mind to have pain," interjected Allan. "You have to have a mind to suffer. That's the distinction we make, operationally, in deciding whether or not to do an experiment." Queried Val, "Why make suffering so important a criterion?" It need not be central on general principles, replied Allan. He had been responding to Steve's suggestion that it's important to determine

whether or not an animal has a "mind" because your conclusion has operational consequences. Performing or not performing a certain experiment on an animal is one such operational consequence. Allan added, "No one would deny that all creatures have reactions which could be considered painful. Even the *aplysia*, I would think, demonstrates the withdrawal reflex. If you continue to carry out a procedure, and tissue will be injured, will the organism be having a painful experience?--that's the question. I myself would think it's not ethical to do experiments in animals where you had any doubt about the answer." All experimentation on animals, he added, can only be morally justified relativistically, not absolutely.

In response to Alan's question, Allan went on to observe, "Cats are savvy. I think they dream at the level of having replicas of waking experience. Replicas, but not replicas of replicas. They don't recognize that they're dreaming, or give others dream reports." Allan added that cats' docile natures were morally disarming. He had previously performed experiments with dogs "and couldn't stand it. They would look at me, and whimper" and he would soon have philosophical qualms about the ethical correctness of his work.

But, Allan added, he feels there are many other reasons besides this operational/ethical consideration to want to know if animals have "minds" and, if so, what their character is. There's "just the pure intellectual challenge of it." Additionally, considering animal behavior from a cognitivist perspective suggests alternative models for brain processes, new types of experiments to pursue. "And then you've got to go into these animals' brains," admonished Allan, figure out what's going on physiologically and correlate your findings with what you hypothesize is going on psychologically. Unite mind and brain, "isn't that the idea?"

Dan Barboriak wondered if it was a workable idea. He thought the group had, in responding to Bob Goisman's challenge to define why it might be important to understand the nature of the animal mind, overlooked his warning that it might be difficult, if not in principle impossible, to accomplish this goal. "On what kind of basis can we tackle the problem of mind?" asked Dan. Dan's opinion was that, contra Griffin, "you can't tackle it on a scientific basis." We can talk about our intuitions about whether *aplysia* is an organism we're torturing, or whether it has a lesser, but still genuine internal experience of pain, or whether it's just a collection of cells responding physiologically with no real subjective experience. But the question that keeps coming up is: how would we really know?

"Is it your position that you can't do scientific studies on such issues as consciousness?" challenged Allan?

"Yes", Dan replied.

"Well," admitted Allan, "a lot of people would agree with that."

But we can study the human brain to decipher the human mind, argued Val. Because we can attest to both our objective behavior and our subjective experience, men and women are uniquely situated to bridge the gap between mind and brain. If cellular reactions create human experience, we can determine which physiological events are crucial, and how they differ in man from those in the gorilla, spider monkey, horse, whale or leech. "How you pose your questions will be important," added Bob. Simply looking at neurophysiological differences between two kinds of primate will not address the issue of "are there minds there?"

Anya noted that Griffin had emphasized the study of communication behaviors in lower species as a royal road to the animal consciousness. Animal communication, Griffin argued, performed analogous functions to, and undoubtedly provided the evolutionary anlage for, human language and its intimate connection to thought and self-consciousness. Anya observed, however, that theorists such as Norman Geschwind had contrasting views of the development and role of language. Geschwind points out that even primitive organisms divide the world into categories, e.g. pigeons separately classify cars and nuts. Communication, he suggests, is not the fundamental purpose or origin of language at all. It is bound up instead with this creating of internal representations, which is so basic a function of animal nervous systems that it is difficult to draw distinctions between species upon it at all.

Dan then drew the group's attention to a passage in the Griffin article he had found particularly interesting. Griffin writes:

The possibility that animals have mental experiences is often dismissed as anthropomorphic because it is held to imply that other species have the same mental experiences a man might have under comparable circumstances. But this widespread view itself contains the questionable assumption that human mental experiences are the only kind that can conceivably exist. This belief that mental experiences are a unique attribute of a single species is not only unparsimonious; it is conceited. It seems more likely than not that mental experiences, like many other characters, are widespread, at least among multicellular animals, but differ greatly in nature and complexity.

Noted Dan, Griffin's argument here can be interpreted in two very different lights: 1) It is possible for us to conceive of and describe forms of consciousness very different from our own, or 2) It is possible for us to conceive of but impossible for us to describe other types of consciousness--our human-centered experience could not provide us with empathetic access to such radically different forms of awareness. Bob responded by observing that the depiction of fundamentally alien consciousnesses was a favorite theme of science fiction writers. Their imaginative speculations are often quite sophisticated, incorporating different modalities of perception, alternative biological systems of communication, non-standard rules of syntax, and differing social systems. Such ingenious inventions of writers of imaginative fiction, Bob suggested, must be taken to offer some hope that we can break out of the Wittgensteinian prison of our own form of consciousness.

Val then returned the Assembly to the project of delineating a continuum of awareness across human developmental stages and evolutionary timescales. An encompassing human spectrum would run, he suggested, from geniuses at one end through normal individuals in the middle to anencephalic infants at the opposite pole. Just that last example had run through Alan Green's mind. Alan had recently seen a severely retarded 28 year old man. He had an IQ of 30, produced sentences no more than 3 words long and was constantly pulling his fingers. "What is the level of this man's mind?" Alan asked. Can we truly empathize with his experience, and where on our postulated continuum of awareness would he be placed?

Could objective tests be adapted or designed to rank different individuals, or different species, on a single complexity-of-internal-representation scale?, Allan Hobson next indirectly queried. "Would apes," for example, "achieve significant scores if administered an appropriately redesigned IQ test?"

Steve Stelovich sounded a cautionary note. "I'm intrigued by the variability of normal human conscious experience to begin with. The umwelt for each of us is so different, without resorting to extreme examples." Steve recalled a patient he saw as a psychiatry resident. At the end of each session she would move toward the door, but be unable to find her way out, and would begin to act strangely. She was labelled an "acting out borderline...", but now Steve has second guesses concerning "just what was that woman's experience?" "No wonder she was impossible to get along with. She was lost 24 hours a day." Much of psychotherapy, Steve noted, revolves around events people see differently. That's what the concept of the whole enterprise is, developing an interpretation of how the patient has perceived his or her world.

Ebbie Stewart observed that all too often we uncritically project our own experience out onto others, both man and beast. Her family dog, she revealed, is almost more a part of the family than she is, since she's left her ancestral home to begin making her own way in the world. When the dog makes "crying" noises, both she and the rest of her family automatically conclude he's upset in much the same way that people become upset. How realistic an assumption is this? How much does it miss in what is really taking place within her dog's canine consciousness? Allan replied that although Ebbie may never know quite what her dog is thinking, she can be virtually certain it has emotional import and that she is accurately recognizing her pet's emotional state.

Allan, still seeking to crack holes in the wall of Dan's doubts about the possibility of scientifically studying other minds, then turned to our resident skeptic. Did Dan seriously doubt the existence of consciousness in other organisms. No, came the reply. Then, Allan observed, we can sidestep some difficulties. There's no need to try to experimentally prove the existence of awareness in others; we may take it as given. Perhaps the concept of brain states could then come to our aid. Such states are defined in terms of objectively measurable variables--the sum of all contemporaneous

conditions within the nervous system at a given moment. Yet brain states may be presumed to have a precise one-to-one correspondance with subjective mental states. This suggests the possibility that one could accurately predict subjective states on objective grounds.

Unhappily, it fell to Val to point out that Allan had not solved the mind-body problem. He noted that even if one could represent every physical variable in an individual's brain, and the transformations they underwent upon exposure to a known stimulus, one still could not claim to be able to produce an accurate, qualitative description of the phenomenologic experience of the individual in question. One might be able to say (or predict the subject will say) the individual is seeing the color red, but one still could not claim to know the individual's internal experience of the act of "seeing red". The familiar old dilemmas return with their usual vengeance. Is another's red the same as my red, or as my blue? Is another's pain the same as my pain?

Jeffrey Saver reported that a few researchers in artificial intelligence have recently suggested a way in which to do something useful with the mind-body problem they are continually bumping up against. (Usually, to paraphrase Mark Twain, everyone complains about the mind-body problem, but nobody does anything about it.) They proposed that statements of the mind-body problem might be used to test for the existence of consciousness in a computer (as in a Turing game). Only an entity which itself had subjective experiences, the speculation ran, would be able to comprehend and respond appropriately to the dilemmas we humans know all too well of accounting for and communicating our mental states.

Allan suggested it is already possible to design machines that can report on the status of their own internal programming. Already the line between pure mechanism and fully developed self-consciousness is being blurred. Allan, Anya and Jeff then reviewed for seminar members the central tenets of recent thinking and speculation in the AI community, as reflected in the writings of Douglas Hofstadter and others. What is required for consciousness, the AI argument runs, is a system with a built-in freedom allowing for unpredictable novelties in its states. To suggest that such conditions could be incorporated into artificially designed machines in addition to living organisms is not to advocate reductionism. The system envisioned is infinitely expansionistic, but it is nonetheless wholly described by the interaction of its parts. Its emergent properties are solely functions of its components and their interplay.

Most machines, Steve added wryly, unfortunately are stuck in the anal phase of development.

The Assembly plunged back into moral issues when Dan next pointed out that following the development of machines that think it would only be a matter of time before philosophers and scientists would be confronting seriously the new moral dilemma of determining what rights are owed artificial constructs. Jeff observed that the

Kantian tradition that lies at the heart of Western morals would suggest that the appropriate criterion for inclusion in moral considerations is not the physical medium (machine hardware or animal brain) of an agent's activity, but the agent's functional capacity to act as a reasoning, autonomous, goal-setting being. The remainder of the evening's discussion was devoted to members' relating of personal experiences in laboratories past and present when they confronted first hand moral issues in animal experimentation.

"What, if anything, do animals think about?" Donald Griffin had asked. While the Assembly's discussion did not provide the definitive answer to this profound question, it did reveal the answer to a couple of related, and still quite important, queries. What, if anything, for example, do physician-researchers in training, and faculty in academic biomedicine, think about the moral basis for their experiments with non-human animals. They turn out to think long and hard about the justifications for the work they do, to be sensitive, both intellectually and viscerally, to the wrong of inflicting needless pain on another being, man or animal. And what, if anything, do such observers think about the project of determining what animals think about? They are optimistic. Though knowledge of the philosophical pitfalls that lie ahead tempers their enthusiasm, they recognize that recent advances in both neuroscience and artificial intelligence hold great promise of opening up powerful, new approaches to bridging brain and mind. And they recognize the importance of the task. Not solely because our treatment of animals may be critically affected by the outcome, but also because the results would shed new light on our own nature, it is imperative that we seek to comprehend as fully as possible the minds of animals.

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January 11, 1984

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# ART, MIND, AND COLOR

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Chapter 11  
Art, Mind, and Color  
Meeting of 11 January 1984

Presenter: Jennifer Stone  
Host: Anya Hurlbert  
Correspondent: Tal Laor

"What an awful trade that of professor is,--paid to talk, talk, talk! I have seen artists growing pale and sick whilst I talked to them without being able to stop. And I loved them for not being able to love me any better. It would be an awful universe if everything could be converted into words, words, words."

Letter to Grace Norton, 1892

The January meeting was held at Anya Hurlbert's apartment, with Jennifer Stone leading the discussion on "Art, Mind, and Color". Also present were; Chris Austin, Daniel Barboriak, Liz Mort, Sarah Feldman, James Gaudet, Bob Goisman, Alan Green, Shelly Greenfield, Jennifer Haas, Allan Hobson, Anya Hurlbert, Tal Laor, Lee Learman, Jeff Saver, Val Slayton and Steve Stelovich.

Suggested readings were; "The Psychological Working of Color" by Wassily Kandinsky, "Psychological Meaning of Color" by Bernard Levy, and "Out of Childhood's Wonderland: Through the Looking Glass of Art" by Judith Simmons.

Jennifer began by presenting the idea that as scientists, we are trained to think analytically, but with art, we can be irrational, spontaneous and full of emotion. With the aid of a color wheel, she explained that pure colors alone can create emotions and yet set boundaries. Yet even with boundaries, colors can also interact with each other. On the wheel, neighboring colors are harmonious, whereas opposite colors are contrasting and discordant. Colors possess psychological characteristics, some being warm, while others are cold. Why do they have these assigned relationships?

Alan Green cited examples from his patients. Manics tend to wear yellow and reds, while those who are depressed dress more darkly in browns and blacks. Bob Goisman had a patient who painted her fingernails to correspond with her moods. Allen Hobson told us that Harvard Audiovisual Department has a tape on the "Chromatic Woman", a manic who tends to emphasize purple. Lee suggested that it might be interesting to see what effect color can have on children, on those not as mentally mature as adults. He related an experience visiting a home for disturbed children. The "time-out rooms" for misbehaved children were usually blandly colored. One was painted a soft blue and this seemed to help the children calm down. Sarah added another example of the relationship between color and feelings. She read an article on restaurant coloring. The fast-food places such as McDonald's and Burger King tended to be bright. Other places done in beige and pale browns seem to imply an air of elegance.

Bob pointed out that "symbolism tends to be portrayed in absolute terms." He read studies directly contrasting with Lee's remarks. Blue tends to be stimulating, where shocking pink is sedating. (The Massachusetts Mental Health Center's intensive care unit seclusion rooms are painted shocking pink.) There are claims that light wavelengths have some differing physiologic effects. Jeff asked why blue is either calming or stimulatory. Do shorter wavelengths possess more energy? In response, Anya suggested that no universal meaning seems possible. Physiologically, cells may have limbic connections like those of sound and sight. Each person may build up his own individual connections.

Theories appeared to be overabundant. Alan Green questions the role of brightness. Bright white lights are used as antidepressants. People often have seasonal depressions which are alleviated by increasing daylight. Are feelings associated with color actually more reliant on lightness or darkness instead? Steve pointed out that more than one million colors exist. It is difficult to imagine a certain "wavelength-feeling relationship" when so many colors exist. In response, Jeff related that he had read of experiments with different colored chips which were shown to people who came from disparate world cultures. The colors were to be assorted into various classifications and surprisingly, the different people tended to clump them into the same four basic categories. Does this imply similar brain connections?

Anya described some experiments performed by Edwin Land at MIT. Sequences of color were illuminated with different wavelengths of light, yet the colors that were produced were perceived to be the same. Therefore, do the different surrounding colors actually affect our perception? In response, Chris described Dr. Hubel's experiment of a bright blue shirt worn in conjunction with a contrasting tie. The same shirt was illuminated with different lights and was perceived to be of different colors. Does this demonstrate the relativity of the cellular response? Psychological responses to color may be mediated by cells in the occipital lobes and the connections they have to the rest of the brain. It appears that color interpretation is more complex than the concept of wavelengths...

Jeff introduced the question of our consistency with respect to our reactions of two colors. Jennifer Haas pointed out that Kandinsky's art seems based on "factual things". Her own experience of dreaming in color is that dream and real-life

colors are not always the same. We tend to dream in colors associated with different feelings. For example, Andy Warhol's pictures of the same image, in different colors elicit different responses to these same images. Shelly explains that Kandinsky painted in pre-revolutionary Russia. He traveled between Germany and Russia, eventually creating a "post-revolutionary link." Rebuilding art paralleled the rebuilding of Russian society. In approximately 1924, he returned to Germany, integrating the social changes into his art. Allan Hobson believes that Kandinsky was "turned on" by the revolution. He was like Shostakovitch.. Artists were being patronized by the new government but they often extended beyond the allowable boundaries and subsequently fled. Steve questioned what type of psychiatric diagnosis would be associated with his boundless color splashes, He also wondered what interpretations would be made for the works of Rothko and Pollack. Jennifer noted that Kandinsky's earlier works were more subtle, with more black and white. Continuing on with the history of Kandinsky, Allan Hobson remarked that he was linked to ~~Bauhaus~~. His works do not seem disorganized, but rather quite controlled, serene and balanced. Now his works can be seen in the Guggenheim Museum. He was an "intellectualized artist."

Turning the discussion back to color, Jennifer Stone pointed out that a colored object can touch all senses--sight, sound, and taste. Allan Hobson questioned whether anyone tries listening to music with closed eyes. The images change. Is there some physiological mechanism? As an example, Lee recalled a girl in high school who could pick up a perfect pitch by thinking of a certain color. How do only certain people learn perfect pitch? Anya replied that relative pitch can be learned, but perfect pitch is innate. But how? Likewise, Allan Hobson asked if there are people who have an absolute sense of color and therefore cannot stand "dissonant colors". Do people have the same color and sound sensitivity? With respect to imitation, for art, there is a negative value whereas for music, quality often lies in the ability to reproduce. Steve disagreed. It may hold for Western Classical music, but not for the jazz improvisationists. Alan Green noted that musicians produce pitch combined with rhythm. With art, interpretation depends on an individual's ability to see

color. A musician can differentiate pitches      Can artists differentiate between similar colors?

The discussion was not concerning analogous items, Sarah pointed out. Notes equal colors, not music. Music equals visual arts and how things are put together. We should consider how units are combined. Perfect pitch does not necessarily mean good music. Daniel added that the value of music is put on the discrimination of tones, whereas with color, two tones are perceived as one. Sarah raised the point of color and taste. Are feelings to certain colors universally cross-cultural? Or are associations historical, sociological or psychological? Without her glasses, Sarah has different color perceptions and feelings.

Jeff thought that Kandinsky seems tentative about the project of constructing a universal language of tone and response to color. It is a loss that we do not have universal tone, which would be a great help to abstract artists. Chris wondered why the revolution chose to associate itself with red...Steve questioned the use of light and dark in religion. Near Eastern civilizations use white to mean order. There is a shiny star near any holy god's name. Ancient Greeks depicted gods with light. Likewise, the Christians do. Saints are also depicted as light. Light seems to equal order and lack of it is disorder and evil. This idea seems to span time and culture. How does this affect non-light-skinned people? Do they run into a problem when they depict their gods? We associate safety with light. (The only area of white we have associated with evil is with Moby Dick!) Bob recalled the black activist movement during his college years. Did black's color association with evil and darkness contribute to the perceived low self-esteem of black people?

Lee asked if color added to the "goodness" of light? Steve replied that we must keep light and white separate. Eyesight appears to be a developmental issue. It can be terrifying to wake up in the dark. Night lights are important to help children control their environment. Bob added that Orientals use whites for mourning, whereas Western culture uses blacks. Anya told us of an MIT artist who believes that light equals future and dark equals the past. We are afraid of the dark, yet creativity often comes from the darkness.

Shelly pointed out cultural associations to music. Arabic music seems grating and irritating to her. Is it due to her earlier exposure? Maybe this is true of color also. Liz believes that adjustment might be possible. People can like both rock music and Frank Sinatra!

Colors have different associations for different people. Some found black to be dark and somber, whereas Steve felt it was happy and joyful. Blue tends to be a happy color. Red, for Anya, has always been associated with Communist evil. For others, it is harsh, often associated with prostitution. Yet some found it to be warm, sometimes too warm, and even fiery. Each person seems to have developed positive or negative color connotations and to gravitate toward their favorite colors. Jennifer Haas disagreed. Her favorite colors have always changed. Sarah added that she once heard pink and green together were awful. When she saw a rose, she realized how beautiful it was, bringing up the importance of form associated with colors. Jennifer Haas reminded us of the importance of boundaries. Both Steve and Daniel raised the question of "perfect boundary sense". Take Piet Mondrian. Was he crazy? He used black, white and primary colors in his paintings. Do his minute boundary changes mean anything to him?

Jeff raised another issue. We all assumed that we were seeing the same colors when we called something red. Can people imagine that each individual has his own color spectrum, and yet we all describe the world in the same terms? Steve imagined a neurologic operation to switch brain connections. For example, the connections between eye and acoustic channels. One might get around perfectly well, he suggested. We would "listen to the Metropolitan Fine Arts Museum and watch the Boston Philharmonic Orchestra". People could probably learn to communicate. One seminar member had a friend who tried LSD and "saw sounds and heard colors." Bob wondered if artists are talking about "synesthesia". (Hearing colors.)

Now the discussion turned to the therapy side. Jeff saw therapy as being quite subjective. Therapists interpret feelings of other people. Bob referred to the "Alice in Wonderland" reading where visual symbols were used as triggers to help the artist work issues out about herself. Allan Hobson sees art as crucial,

especially for long-term therapy. It is not for diagnosis, but creativity tends to make people feel better. People use colors to improve their environment and appearance. Bob described studies where black and white children drew themselves on different colored paper. Neither group colored themselves in. Does this reflect white socialization? Inferiority? While in Mississippi, Robert Coles saw that white children drew in the center of the paper, while black children drew in the corners. Does this infer inferiority? This seemed to be a legitimate application of art interpretation.

Steve gave a case example where art became a powerful tool ~~as~~ part of the therapy. A man who once worked with troubled children had a younger sister who had been badly burned and scarred. She became a terror. She moved away, much to the family's satisfaction, and no one ever talked about the incident. Only the man, who himself was an artist, felt he must paint the day his sister was burned. The picture began slowly and he procrastinated. It was gray and muted. Eventually it emerged and colors became light and bright, with big forms. It depicted him "in space", symbolizing his being thrown aside. He hated his sister, mother and father. The colors became violent. Upon completion of the picture, he could talk about the incident and was finally able to go back to work.

Jeff warned that we must be careful of interpretations. Liz asked if it is recommended that patients sit in museums. All n Hobson replied yes, and perhaps even recommend art school. It is great therapy. People thrive on it as a means of "catalytic therapy." Sarah concluded the discussion with the point that we don't always want to be interpreting, but we don't want to miss anything. She gave the example of the children's self-drawings, noting it is the responsibility of the psychiatrist, physicians in general, to exploit all forms of communication in seeking to understand and aid the patient.

April 4, 1984

Dear Allan:

It was indeed a pleasure for us to have the Society visit us at home. We enjoyed talking with the students very much, and we found that for days afterwards our thoughts continued to drift back to that interesting afternoon.

I confess to thinking that some of the students looked a little dismayed when I indicated that we actually read very little about contemporary art, preferring the purely visual approach. It kind of proves the point that I so often make that in our society our education is basically alpha-numeric. People seem to need the written word to hang on to and find it difficult to deal with visual things on purely visual terms.

You are most kind to send along volume one of the Society's meeting summaries. I found this most interesting and hope you will not mind if I express an interest in receiving subsequent installments when they appear.

Finally, here's a rather unusual image created for an American bitters advertising piece dating from about 1885. I find it quite haunting and surreal.

In hopes of seeing you soon again.

Yours sincerely,



Stephen D. Paine

SDP:ack

Enclosure

J. Allan Hobson, M.D.  
Harvard Medical School  
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**Some Associations to Burdock Blood Bitters;**  
**A Response to an Image Presented to the Seminar by Steven D. Paine**  
**by Allan Hobson**

Image:

Subject

An old man-on the outside  
A baby-full of promise-within,  
Burdock reveals the youthful core  
Burdock works on the inside  
Under the surface  
To Recover the Lost Innocence  
To Restore Freshness  
Tired blood, like Geritol.

Formal Treatment

The picture plane is pierced  
(Revealing deep, inner space)  
And it is peeled back  
(Revealing the message)  
The cut occurs at the tip of the nose  
Splits the head (ache) into four parts  
The Mouth (take the medicine) is not shown  
The results, which show thorough, are rosy lips, smiling-  
A New face.

Copy:

The age-old functional complaints of late middle-age:  
Dyspepsia: stomach upset, broken down  
Biliousness: gall bladder & blood  
Sick Headache, Insomnia, Anxiety  
Constipation: Loss of spirits, fatigue, depression  
The whole bit!  
Neurasthenia, fatigue, depression and anxiety  
It's a panacea (for the complaints that respond to suggestion).

### History:

In 1885 William James was suffering from all the listed complaints as he struggled to complete his *Principles of Psychology* (begun in 1878, published in 1890). (His whole family had the pip one way or another but his sister Alice really had it bad.) They probably used Burdocks. The spas of Europe (and New England) were full of dyspeptic, constipated, sick-headachey, bilious gentry just as today's outpatient departments are clogged with sluggish (if less blue) blood.

No wonder this tired old world was ready for Freud to promise an undoing of the symptoms without swallowing horrible tasting goop. Just regress, cut the picture plane, find the child within, and regrow the self along healthier lines!

### Summary:

The picture both summarizes the state of 19th century medicine and anticipates the change to more modern views which are not, however, formally different. We still grow old and we still yearn for youth. That's what makes teaching young students so deeply meaningful. Glad you enjoyed our visit. Hope to work with you again.

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February 23, 1984

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THE  
MINDS-BODY PROBLEM:  
SPLIT BRAINS AND  
DOUBLED CONSCIOUSNESS

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Chapter 12

The Minds-Body Problem: Split Brains and Doubled Consciousness  
Meeting of 23 February 1984

Presenter: Jeffrey Saver

Host: Jeffrey Saver

Correspondent: Shelly Greenfield

"[T]he most stirring controversy in nerve-physiology which the present generation has seen has been the localization question."

The Principles of Psychology, 1890

In this session, students and faculty explored the implications of hemispheric dominance and lateralization. In preparation, members read "Hemisphere Deconnection and Unity in Conscious Awareness" and "Implications for Consciousness in the Normal Intact Brain", by R.W. Sperry and "Lateral Specialization and Psychiatric Issues: Speculations on Development and the Evolution of Consciousness", by David Galin. The readings presented patients with commissurotomies and demonstrated evidence of lateralization of functions such as writing, speaking, and emotion to the right and left hemispheres. The articles raised the questions of the implications of this research on our concepts of conscious and unconscious mind, memory and self.

Participants began the discussion by trying to relate the phenomena of hypnosis, hysteria and lateralization and by exploring the notion that anatomical lesions could mimic responses of repressive episodes. Examples of temporal lobe epileptics and stroke patients were given to support evidence of lateralization. Members explored Galin's suggestion that the right/left hemisphere dichotomy provided the anatomic underpinning of Freud's hypothesized conscious and unconscious minds, extensions of the hemispheres' well-known verbal and nonverbal functional specializations. Considering experiments wherein the corpus callosum was cut and patients experienced right/left dissociation, participants discussed other dissociative phenomena such as nitrous oxide and its effects on consciousness and pain. Also, members explored the connections between speaking, listening, reading, and writing and noted that some could learn by listening, others by reading, and still others by writing. How are these functions connected in the brain and what makes one of them more dominant in one person than another? Also, what role does the corpus callosum play in transmission, integration, and inhibition of brain information and functions?

One member pointed out that there may be many brains or minds within one and that duality (right/left, conscious/unconscious) may be an oversimplification. In response, discussants explored the means by which their minds problem-solved when they weren't conscious of an ongoing psychological process, the import of such unconscious mental work for the concept of "self," and the phenomenon of multiple personality.

Jeff: Since the overview article by Sperry was published, the distinction between right and left hemispheres has become more clouded. Some significant developments on right and left hemisphere work have occurred. Work has been done on highest functioning expressed by the right hemisphere, including experiments explicitly designed to determine if the isolated right hemisphere can be considered self-conscious. For example, in one study pictures of Johnny Carson, Richard Nixon and other figures were flashed and split-brain subjects were asked to indicate thumbs up or down (left thumb). The response indicated that the right hemisphere has independent opinions and values which may vary from those of the same individual's left hemisphere. The linguistic capacity of the right hemisphere is greater than what was earlier described. The right hemisphere has a high vocabulary for single words and, in addition, some syntactic comprehension. I was hoping that we would use the split-brain as a starting point to consider the broad view that there are multiple functional units localized in the brain. The split-brain might be only the most provocative example of disunity of the mind. How can these areas be integrated? How do they talk to each other? Is the view of mind as an assembly of relatives independent, specialized subunits a new, alternative concept of human nature? Does the Galin article suggest alternate or complementary explanations to traditional psychoanalytic interpretations of the more bizarre behavior displayed in everyday life? Is there a multiple consciousness underlying our own behavior and reflecting our normal, everyday experience of disunity of self? I would like to quote Norman Geschwind from Jonathan Miller's States of Mind:

"... Once you realize the concept, you should go back and look carefully at the normal. I believe that the odds are that disunity is present in normals, although we have overlooked it. When someone tells us that he is of two minds about something, he may not realize that the apparent metaphor may be an unwitting statement of fact... What we have learned is that the brain really is a kind of federation and, a loose federation; it is not perfectly connected. The extent of disunity varies from person to person. In any case, there does not appear to be a central prime mover overseeing all behavior."

and those are my introductory remarks.

Saunders: Do you know if any research has been done on split-brain patients and hypnosis? Is there any evidence that the "other observer" of the hypnotic trance state is localized to the right or left hemisphere?

Bob G: Could you induce hypnosis and bring about similar findings as a surgical lesion made on the same hemisphere?

Steve: There is vast literature on hysteria from turn of the century France. There were very peculiar, bizarre, eerie experiments on automatic handwriting. A patient's hand was placed behind a screen and the hand would begin writing. The hysterical person claimed he knew nothing about it. You can tap many different memory banks.

Bob: And in modern-day split-brain subjects there were also experiments done where the subject watched slides of a nude body flashed on the screen (described in our readings). Only one hemisphere registered the image (i.e., the right hemisphere) because the slide was flashed to the left visual field. The subject could not state what he or she had seen, but did giggle and say, "Oh doctor, that's some machine you have here." (Presumably, the verbal left hemisphere had sensed the emotional physiological response generated by the right hemisphere's perception of the stimuli, but had no knowledge of the exact nature of the stimulus which had not been presented within its half of the visual field.) This response was similar to a repressive episode, but was anatomicogenic (the corpus callosum had been cut) and not psychogenic.

Steve: There was only one set of experiments Freud thought were worth a darn. Tachistoscopic pictures were flashed so quickly and people didn't know they saw them, but the material came out in dreams. The immediate question was, why of the 50 billion subliminal stimuli were these picked from the memory bank?

Alan: There has also been work on schizophrenia and cerebral dominance. Dominant overdrive supposedly occurs in schizophrenia and this is presumably anatomically based... People given stimuli turn in one direction or another and this is a different direction from normals.

Chris: What do you mean by anatomical causation?

Bob: I meant anatomic changes due to surgery as opposed to hysteria or hypnotic phenomena. Though it used to be believed that there were organic changes that appeared in hysterics that disappeared at death

Jeff: How did the psychiatrists here find the Galin study which found that unilateral conversion reactions occurred more often on the left side of the body and suggested they were forms of expression of a right hemisphere denied control over the patient's verbal output by the left? Do you have the impression in the patients you've seen with conversion reactions that there is something akin to the right hemisphere trying to get out?

Steve: I don't understand why one set of my emotional reactions should localize in one part of my brain.

Alan: Galin's speculation doesn't help you with non-lateralizing hysteria, however. Feelings are thought to be right and logic left. But we see this problem (hysterical conversion reactions) so seldomly, it is difficult to know how to generalize.

Steve: One of the things that made me think is the French study on automatic handwriting. The hand is carrying on very verbal communication, but movement is left brain involved.

Val: Galin's findings are reversed in males. Why would that be?

Steve: Even if you were convinced that Galin had found a true statistical tendency, it isn't clear it would tell us anything useful in an individual case of conversion disorder.

Sarah: I was wondering if in normal non-hysterical patients, you could test this.

Val: Sodium nembutal has been used in epileptics to anaesthetize one side of the brain and you see the lateralization of emotion.

Alan: Studies of stroke patients also show that unilateral expression of emotions are different on each side. This goes along with Geschwind's work. DST's go along with this. What does all this have to do with psychiatric disorders that we see routinely? Would nembutal change hallucinatory patterns?

Val: Most of us saw the temporal lobe epilepsy patient who was discussed in Psychiatry 700K, "Behavioral Science in Medicine," last year to illustrate how a unilateral brain lesion can lead to changes in personality that may mimic psychiatric disorders. Jeff and I saw a similar patient last year who had an accident and developed a left sided epileptic focus. Over the next seven years he became serious, lost his sense of humor.

Alan: A focus on the right or left side produces differing patterns of personality alterations such as heightened emotionality, hyper-religiosity, etc., depending on the lateralization.

Anya: What is the purpose of the commissurotomy?

Bob: After surgery, you can still have local spread of an epileptic focus, but it stops the spread of the focus to the other side of the brain.

Anya: Could a commissurotomy arrest the changes in the personality of the temporal lobe epileptic by stopping the effect of seizures on the other hemisphere?

Jeff: It sometimes seems to dampen the activity of the epileptic seizure focus itself, not just the spread of the focus.

Sarah: What about the incidents of multiple personality?

Jeff: There are very few of these patients (commissurotomy patients) actually.

Alan: It has been suggested that there is a higher incidence of multiple personality disorder in TLE patients.

Anya: From the personality of TLE patients, it sounds like there already is a commissure problem.

Jeff: One of the patients reported in the early neurologic literature, in 1908, a patient of Kurt Goldstein's, was a woman missing the commissure. Her left hand tried to strangle her and her right hand had to remove her left hand from her throat. Also, one of the split-brain patients slaps his wife with his left hand (right hemisphere), but verbally (left hemisphere) denies knowledge of his motivation for doing so.

Bob: It is tempting to interpret the right/left hemisphere split and consciousness versus unconsciousness.

Val: Maybe it is verbal/nonverbal and not conscious/unconscious.

Sarah: Last week we saw a film of a woman with a C-section done under hypnosis.

Anya: That was so awful. The woman was singing and wincing and grimacing.

Sarah: Despite the wincing, she later denied pain. It was clear that there was something going on. Perhaps the two hemispheres dissociated.

Bob: We could construct an alternative hypothesis to the idea of the unconscious.

Steve: But it is hard to say that there is nothing going on when she's wincing.

Sarah: Is unconscious/conscious just one way to explain the two hemispheres? Perhaps only one hemisphere can be hypnotized, so the right hemisphere may be hypnotized or the left?

Scott: When I had nitrous oxide at the dentist, I knew there was pain but I didn't care. I laughed.

Liz: No. You don't feel the pain at all.

Scott: You must have a better dentist.

Alan: But you know the pain is there. When I had nitrous oxide, I imagined that I was conducting the orchestra music that I heard in the background. There was a sensation of discomfort.

Scott: Nitrous oxide is very different from novocaine.

Bob: There is something called dissociative anaesthesia. It produces a dissociative state similar to nitrous oxide, but also makes you psychotic. It is used to change children's burn dressings.

Shelly: Are you not having the emotional reactions or are you not able to express these reactions?

Chris: Is there lateralization of the endorphin receptors?

Alan: I don't think so.

Scott: I had two very different experiences with nitrous oxide. The first time I loved it. The dentist became the funniest guy. I was dissociated and very happy. The second time I was very dissociated. I felt like I had left my body. I was very scared. No control over what was happening to me. I had a panic reaction. In my mind, I was flailing. And the dentist tried to calm me. But I heard his voice very slowed down.

Scott: How much lateralization is there in our everyday lives, changes in moods? Manic depressives are in a constant state of emotional flux. Is there a part of the brain more dominant, controlling this than in normal people? How would you test this? Catastrophic reactions can occur if you let the right brain loose if the left brain were anaesthetized? What would happen?

Alan: What is the relation between endocrine changes and TLE, or depressive reactions and unilateral events?

Jeff: Some researchers suggest that both hemispheres have their own emotional tone. The right hemisphere is sad. The left is happy. Do you remember that other patient presented in Psychiatry 700A last year who had a right-sided stroke? He was very happy.

Chris: Have people looked at the EEG's of this?

Bob: It would be fascinating if you could show hyper vs. hypo metabolizing of glucose in manic depression.

Alan: Some depressed patients may have a unilateral right-sided epileptic focus.

Sarah: What mechanism would account for the switch from manic to depressive? There aren't many biological mechanisms that switch from one side of the brain to the other.

Bob: Anti-depressants can switch people from depression to mania quickly.

Sarah: Writing and talking on the same subject can be very different. I don't write the same way I speak.

Scott: But that's probably your training.

Sarah: Not just the training, though. I talk on the phone and I can't write letters. But some people can write beautiful letters and can't articulate out loud.

Steve: When I speak I see it. When I write, I am listening. Perhaps the auditory and visual centers are hooked up differently to these.

Jeff: One might expect more interference on writing than on speaking. With speaking, there is less time for processing.

Steve: I can't listen to verbal material, so in medical school I could get nothing from the lectures, but if I could take it home and read it, then I had it!

Alan: I was the opposite. I never took notes. I just listened.

Anya: I must write what someone said before I can understand it.

Jeff: Lateralization for the perception and analysis of music is different in musicians and non-musicians. What about that?

Scott: Aphasics can sing and not speak. Are these different hemispheres? I can hold a conversation or read and play the piano at the same time. I can't do two musical things at once. I can't read and listen to music at the same time. I'm too tuned in to the music.

Jeff: Can you do spatial tasks when you play music?

Chris: Aren't speech and hearing centers in the same place?

Val: The raw processing may be in the same place, but the understanding may not be. There is a difference in lateralization.

Chris: But shouldn't these things be in the same place?

Anya: If you have one area that is the auditory association and then there is a separate visual associative cortex... these are developed on your dominant side. What happens when one hemisphere is more dominant?

Jeff: Linguistic capacity is left hemisphere-dominated and the left inhibits the right. The opposite is true for the right hemisphere functions.

Anya: You can think of the callosum as the route for information and as a means of inhibition.

Steve: There is a mild propensity for lateralization in our bodies to operate even without split brains.

Dan: Talking about lateralization implies there are only two brains. There may be many different centers and the number of these might depend on how you define the term "brain." Even if we focus our attention on one thing in our consciousness, I'm sure many streams of thought continue working themselves out without our being aware of them.

Steve: Isn't that what Borges said, "Millions of different brains and personalities inside of me. What you see now is just one of me."

Jeff: When, in the stream of consciousness, you return to an old issue, you often find that you feel differently. Something has occurred in your mind when you weren't looking.

Chris: When something happens that bothers me a lot on a Sunday and then I go to classes on Monday and I am distracted -- seven hours later, it has resolved itself --. If I give my brain some time, it will figure something out. Something must be going on.

Liz: You don't go through any conscious resolution process?

Chris: Yes, I do to a point, but then I'm distracted and later it occurs to me again and it is resolved.

Sarah: Like when I go to sleep and am tense and in the morning it is resolved.

Scott: The anatomy of the brain is fascinating to look at. It looks like the conglomerations of little creatures. The cerebellum is so perfect in its own unity. In evolution, there are other creatures not living with a cortex. Where is consciousness localized?

Chris: It makes you wonder about the source of consciousness. We analyze what we do -- animals don't do that. All of our different brains are looking at each other within us, and communicating with each other. Perhaps these are the origin of conflicts in self-consciousness.

Jeff: Howard Gardner points out that self-consciousness is something that is acquired. Frontal lobes are anatomically the place that puts these inputs from the limbic system, etc., together. Impulsive, sexually frank patients with no cultural inhibitions are patients without frontal lobes, whereas in aphasics there is still a self there.

Scott: These people without frontal lobes might be qualitatively different. Perhaps there is no loss of ego, just of superego. From the Sperry article, it says that once you cut the connections, this leads to two conscious minds; if you remove one hemisphere, it leaves one behind; then perhaps this means that you had to have had two to begin with.

Bob: The speculations about consciousness in the reading was the weakest part. The commissure has the role of integration and transferring information from one side to the next. This assures integration.

Jeff: Perhaps there are independently conscious units enmeshed or one conscious and one unconscious and these are released when you cut the commissure.

Anya: You can look at it in terms of Hobsonian states perhaps. When they are together, A + B = C, but when separate, you have A separate from B.

Scott: This raises the issue of whether you can infer anything from lesion studies.

Chris: The brain has a million things to do, so it divides up the functions instead of having a committee approach. When you ablate a section of animals' brains, you haven't localized the function; you might just have cut the pathway. There is redundancy and cross-talk.

Scott: I've done a fair amount of work in labs where they have done lesion studies. They ablate brains and try to detect deficits. When they recorded from brain with a lesioned hippocampus, they got very different recordings than from one with an intact hippocampus. This is a very unsophisticated way to do science. It's like trying to learn how a telephone works by drilling holes into it.

Sarah: Well, would you consider monozygotic twins before the zygote divides one person or two?

Steve: There is an old medical argument that within the sperm there was the child which carried 50 billion smaller and smaller people one inside the other.

Scott: There is an intriguing account of an individual with multiple personalities in The Minds of Billy Milligan. Though in some ways this popular account verges on supermarket trash, it's interesting. It's about a guy accused of raping a woman at Ohio State. After he was caught, it was found he housed 24 personalities, which you get to know. The personality who committed the rape was a lesbian. There are different personalities, but most of them know each other. Whatever person was out there interacting was "on the spot" - like being on stage. Apparently, a number were fixated at various levels of childhood. There was one called the teacher, who was aware of all of them and ultimately told the story to the novelist. The novelist was the same person who wrote Flowers for Algernon.

Shelly: More well known is the book, Sybil. Sybil had 12 personalities. She had been badly abused as a child and with each major abusive episode, she dissociated into another personality.

Steve: We throw around the concepts of self and memory. What is memory? Memory has nothing to do with the reality. Everyone think of a childhood memory. What was the first one that came to mind?

Anya: I remember eating cookies from the bread box when I wasn't supposed to. I remember being small and I was looking up at my mother, not at her face, but at her torso. I was so small.

Steve: Can you see yourself?

Anya: Yes, but I guess I shouldn't. Should I if it is memory?

Steve: Where are our eyes in our memory?

Alan: But multiple personality is also quite controversial.

Steve: Occasionally patients will experience important events in one personality and only that personality will have access to the memory of the event. (An example was provided.) You can understand why in the past some of these patients were labelled malingeringers.

Jeff: Often in multiple personalities, there is a switch in handedness.

Alan: In EEG's also.

Bob: Also, there can be a change in galvanic skin responses and I.Q.

Steve: But we don't do EEG's on people in panic states and other states but only when the person is lying down resting.

Anya: Hypnosis can get people to regress to their childhood.

Liz: Do all people who have multiple personalities have personalities who are aware of each other?

Bob: No, not always. Co-consciousness develops sometimes in different stages of consciousness.

Sarah: Don't people who are quite normal dissociate?

Scott: Why is multiple personality so rare?

Steve: I don't think it actually is so rare. We had a patient diagnosed as a borderline personality. She flailed around, which was her way of showing different, changing behavior. She was a refined, dignified lady using French words; kind of a Southern Belle style, but she could become the most unpleasant person and she used a lot of German words. She could be flamboyant, histrionic borderline, but we could demonstrate that when she was in the Southern Belle state none of the German material was available and vice versa.

Bob: Perhaps multiple personality is a matter of degree of encapsulation.

Chris: Everyone has the capacity to have epileptic seizures, but usually this is inhibited in normal people. In multiple personality, perhaps this is also true and it is inhibited in normal people. Also, what if one personality wanted to jump from a tall building? What happens?

Shelly: In Sybil, another personality would come out and take charge. At times of crisis like that, there might be a struggle between the personalities for the body. One personality usually took the credit for saving "all of them" from the actions of the destructive personality.

Jeff: Which scheme do we think is best?

State concept.  
Multiple centers.  
Psychodynamic ego/superego.  
Inhibition of Ideas.  
Multiple personalities.

Sarah: You can even change your own personalities when you interact with different people. For instance, when you interact with a child, you are parental and when you are with an adult, you become child-like.

Bob: Perhaps personality trait is an invalid concept. We should instead be speaking of personality states.

Alan: Perhaps it is just all interactive, not different states.

Sarah: But there is a difference between people in how they characteristically interact. Scott and I might reliably act differently, for example, in response to an infant or child.



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March 21, 1984

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# PSYCHIATRY AND THE HISTORY OF MEDICINE

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Chapter 13  
Psychiatry and the History of Medicine  
Meeting of 21 March 1984

Presenter: Dan Barboriak  
Host: Dan Barboriak  
Correspondent: Teresa Benacquista

"It seems to me that psychology is like physics before Galileo's time--not a single elementary law yet caught a glimpse of. A great chance for some future psychologue to make a greater name than Newton's, but who then will read the books of this generation? Not many, I know. Meanwhile, they must be written."

Letter to James Sully, 1890,  
upon publication of The Principles of Psychology

PARTICIPANTS: Allan Hobson, Jennifer Haas, Sarah Feldman  
Linda Leum, Shelly Greenfield, Anya Hurlbert  
Alan Green, Bob Goisman, Tal Lao, Liz Mort

READINGS: "Psychiatry in America" by Richard M. Restak  
from The Wilson Quarterly, 1983  
"A Delayed Advance Against Mental Disease" by  
Richard Harrison Shryock from The Development  
of Modern Medicine.

Daniel Barboriak made an eloquent opening speech beginning with an apology for the length of his presentation:

For centuries, medicine had blindly adhered to certain practices that amounted to superstition: the ideas of Galen. There was no need for research. This attitude, however, changed with the Renaissance. Patients themselves began to be observed more closely, some limited gross dissection was being done, and the cracks in the Galenic system began to show. For the next two centuries, doctors would carry out rear guard actions to protect the monolith, or failing that, build a new system. They had as an example Newton, who successfully brought together many different phenomena into a single synthesis, his laws of mechanics. Doctors wanted the same for medicine. As Shryock says, "In the biological field, as in the physical sciences, there had been a rapid accumulation of new data--often of apparently unrelated data...there was a real need to bring order out of this chaos in medicine... it seemed evident that the mere accumulate of facts would continue to confuse medicine unless a rational synthesis could be developed. No better illustration could be found that the confusing state of things in nosography. Physicians tried to classify diseases by symptom in much the same way that they were classifying plant and animal species. When their nosographies listed as many as eighteen hundred presumably different illnesses, it

became apparent that good intentions had made confusion more confounded."

We can all consider this situation ourselves. Imagine that during the night all copies of Friedman's Problems Oriented Approach to Differential Diagnosis disappeared, and you go into ICM tomorrow. So many people with the same symptoms! The 18th Century didn't have Friedman, so they tried to make it up as they went along. Doctors of the time relied mainly on rationalistic armchair speculation. Example of this is Benjamin Rush, "Rush had observed that fever is associated with a flushed skin; it was believed that this was caused by distended capillaries; he, therefore, concluded that the "proximate cause" of fever itself must be an abnormal condition ("convulsive action") in these vessels. So far so good. Passing from fever in general to "fevers" in particular (from a general symptom, to what would today be viewed as so many disease entities), Rush deduced that all fevers resulted from a common disturbance of the capillaries. Passing also by easy analogy from capillaries to veins, and from veins to arteries, he concluded that hypertension of the whole circulatory system was involved. Finally, by a sweeping philosophical gesture as impressive as it was obscure, he included other pathological conditions in the category of fevers, and so reduced them to the varied forms of the one disease. The reader, who may by this time have drawn his own conclusions, should be reminded that this represents the most popular American system as late as 1820. In addition to their feeble logic, systematics exhibited characteristic personal failings. These were egotism, pride in the system as one spreads a new gospel, and a notable desire to defend it against all comers. Such traits accounted for the bitter professional controversies in which some physicians indulged. Obviously, if one philosopher was right, the others were all wrong, and in such cases it was difficult to restrain one's feelings. Dogmatism in medicine was no more inclined to toleration than was dogmatism in theology."

What saved medicine from the philosophers? Modern medicine began in France in the first half of the 19th Century. I'd like to talk about three different men to emphasize three different aspects. These men decided NOT to engage in speculative systematization, but tried to concentrate on what they really saw and heard--an empirical approach.

1. Xavier Bichat - Pioneer in Tissue Anatomy. He said one couldn't look at symptoms to find diseases... diseases resided in tissues.

2. Claude Bernard - wrote An Introduction to Experimental Medicine. His point: Not enough to observe, one needs control of what one is studying to really understand. One needs to intervene, natural experiments are not adequate.
3. Pierre Louis - decided to chuck the system and go back to basics. "For seven years he did nothing but study ward cases and post-mortems. He declined all private practice and for three years did not write a line." From Laennec, he learned that patients should be examined not merely observed. He brought statistics to medicine, and by tabulation he discovered the lack of benefit to bloodletting. He found many old remedies not worth while. This led to a "philosophic" position--therapeutic nihilism--trust no therapy. He was accused with Laennec of being more interested in performing autopsies than preventing them.

Through these methods, disease categories became more clearly defined, e.g. typhus was found to be different from typhoid. They described these diseases pathologically and clinically and they connected these two.

With the triumph of scientific medicine, one supposes it would have been a great time to be a patient. The opposite was true! The triumph of modern medicine came off the backs of the poor, who went to Paris hospitals because they had no place else to go. They couldn't pay so they had to follow doctors' orders. When Claude Bernard recommended control in experiments, in some respects it was these patients who were being controlled, studied like objects. Therapeutic nihilism meant they had no hope, and when they died they were autopsied. Turgenev described a "modern medical doctor" in his story "The Living Relic" (1850): Old Paralyzed Woman says, "Once a Doctor came here and wanted to have a look at me. I said to him, begging him, 'Don't disturb me for Christ sake!' What good was it! He started turning me this way and that, straightening and bending my legs and arms and telling me: 'I'm doing this for learning, that's why. I'm one who serves, a scientist! And don't you try to stop me, because they've pinned a medal on me for my contributions to science and it's for you you dolts, that I'm working so hard.' He pulled me about and pulled me about, named what was wrong with me--and a fine name it was!--and with that he left. But for a whole week afterwards my poor bones were aching..."

To sum it up, the French doctors were like neurologists today..."finding the lesion." It was only after disease categories were defined that therapeutics could advance. Only with the advent of sulfa drugs (1936) did a patient have greater than 50/50 chance of benefitting from an encounter with a doctor.

What does this have to do with psychiatry?

By analogy, psychiatry may be lagging behind in the history of medicine. In many ways it is not yet modern. The confusion of DSMIII is reminiscent of the 18th Century nosographies rather than the 19th. Freud's doctrine is a system that is not scientific, and has many speculative elements. We have some treatments but we are not sure how they work (just as digitalis was available in the 18th Century).

How do we bring psychiatry into modernity? One approach is biological, looking at enzymes, etc. This is good but possibly the approach will lead to a dead end: perhaps the environment is important to mental illness. How do we study the effect of the environment on the mind? We need to turn to psychology and sociology to show us the way. As Leon Eisenberg suggests, "what is called for now is systematic social and behavioural research in medicine, supported by resources comparable in magnitude to those we have so profitably devoted to the biomedical enterprise. There can be no pretense that the psychosocial field yet possesses methods of like investigative elegance and power. Equally, there need be no reason to doubt our ability to fashion such methods once we acknowledge how crucial they are to understanding contemporary health problems."

This sounds like a good idea, or is it? We do not want to expend money on 18th Century style speculation. According to Claude Bernard, we need real control to gain understanding, but what is control in this context? Could human experiments in which sociological and psychological factors (including a person's upbringing and thoughts) were truly controlled take place in a democracy, or would some other form of government be necessary? According to Leon Eisenberg, "Problems of ethics abound. We cannot deliberately fabricate belief systems and practices for experimental study. It is precisely here, however, that research into cross-cultural medicine may prove particularly illuminating. We can take advantage of 'natural' cultural variation to compare and contrast outcomes."

This may be too optimistic an assessment, considering the failures of such 'natural' experiments in the physical, biological, and medical sciences.

I don't think the kind of progress in the psychological and sociological sciences necessary to give them the predictive power seen in chemistry and biology could be obtained without adequate control. I don't think adequate control could be obtained in a democratic state; the necessary manipulation of free human beings would be immoral.

The discussion began with Dr. Hobson agreeing with the presentation in the main. He asserted that psychology not biology is the missing link. He also inquired as to what control is really needed. He felt that Dan's presentation exaggerated the requirements for the study of psychological processes, that one doesn't need political disaster to make progress.

Dr. Goisman then brought up the idea of "sham psychotherapy" whereby one talks to the patient about something not based on any system--this being like a drug placebo--to distill out what is common to all therapies.

Shelly asked, "If there are certain diseases explained by pathology, neurologists will define them, if explained by social problems, sociologists and psychologists will define these. Why have psychiatrists? How are psychiatrists in a unique position?"

Jeff refers to Eisenberg's article regarding the social sciences and whether they deal with the mind. Jeff: Sociologists work from the top down, neurologists work from the bottom up. The special work of psychiatry is to bridge the mind/brain interaction.

Shelly: The system is splintered, it is not set up to be unified--psychiatry could be unifying. People don't know this.

Dr. Green: This discussion reminds me of a recent case of a retarded patient who was a behavior problem. Many drugs had been tried, all without success. On questioning, it was noted that recently the patient's brother had moved out of the house, and that the patient had been very attached to this sibling. One therapeutic approach that was suggested was to have the patient listen to tapes of his brother's voice. Sometimes psychopharmacology alone won't do a darn thing.

Goisman: Dan implied that in the proliferation of DSM III, so many diagnoses represent a regression--I feel this represents a progression. DSM II was locked into one system. DSM III doesn't know the cause of all diseases. The ones we know the cause we will list. Others we will just describe--it is an honest declaration.

Dan: As long as we talk about symptoms it is still no good, no matter how complete a list. The problem is how to get beyond a symptoms classification in order to get less scorn. How much time can we spend fine tuning the symptoms classification?

Green: Biology is one way--an attempt.

Dan: I agree. We should start slicing in other directions.

Hobson: Part of the problem is that we paid attention to psychopathology; now we need to develop integrative normal psychology and developmental psychology. In terms of training, all the ingredients are available. The training now is reasonably eclectic. Part of the weakness is that we want to be all things to all people. Psychiatry has it over neurology in that area. This is an exciting age for integrative psychology. Neurology won't ever reduce it all to the brain.

Hobson(Con't): Looking at the normal will imply all the deficits. Affect will distribute itself in a curve, as will cognitive processes. We need a three-dimentional system where you have all the attributes on the axes, then you can plot yourself x,y,z and you will have a diagnosis.

Sarah: Psychiatry is better <sup>than</sup> neurology in that the focus of psychiatry is on treatment not diagnosis. Neurology only focuses on diagnosis. Psychiatry doesn't depend on diagnosis or normal for treatment i.e. solving the problem.

Anya: It would be great if a broken brain were like a broken leg.

Hobson: Yes, we need to teach the CNS to regenerate itself.

Green: In order to do effective treatment, we need to know what is going on. The underlying pathology will be helpful in treatment.

Jeff: We shouldn't look at psychiatry and say it is 200 years behind. Maybe we need to say that it is intrinsically different and can't be subject to the same rules as the other areas in medicine. The precise relationship between mind and body may be inherently refractory to experimentation.

Dan: If we could devise an ideal system where we can have complete control--breed people, have total environmental control - do you still think it would be refractory?

Jeff: We would have more data. To figure things out requires a change in thinking.

Anya: I think you're saying that variables can't be defined, you need revamping of what you're trying to measure. So even if we have good controlled experiments, what does one measure? For example --happiness--does one measure the number of smiles/unit time. Emotion is not well defined.

Dan: Psychiatry may have to wait for a discovery in some other field in order to progress...maybe psychiatry is behind, but it may not be psychiatry's fault.

Hobson: Regarding Bernardian view of experimentation and "control", it is problematic even if experimenting on the brain itself; we can still have problems in fulfilling Bernard's criteria because we want to see brain activity in its natural state. Regarding subjectivity, emotion is not defined by facial expression. We should not wait for another field to help overcome these problems. Something needs to be done. Perhaps it requires a new set of rules, it will probably resemble the old science; someone needs to write a thin book about a new paradigm regarding experimental methods in the brain.

Goisman: In behavior therapy, Skinner thought that the mind was a black box and behavior is what comes out. Many psychiatric problems don't have any behavior manifestation. Can use the self-report data to quantify date. Then run into the problem of whether the report equals the experience. In behavior therapy of depression, facial expression, number of hours crying, postures...if treat these things and change them, then patient is no longer considered depressed. Many psychiatric problems won't fall into this paradigm. It is a good attempt but it only goes so far.

Sarah: The problem still remains in that self reporting is still subjectively done.

Hobson: Perhaps it won't help in individual case management. Secondly, if get lots of numbers they can be used for different purposes.

Green: The longitudinal relationship in an individual case is useful.

Goisman: I believe it's useful in treatment even in individual situation, even if not elegant theoretically.

Sarah: The problem in psychiatry involves the interaction with the system and this interaction will change the system. For example in medicine, one doesn't stick a catheter into an atherosclerotic plaque every day, which is analogous to what is done in psychiatry.

Goisman: It is true in hypertension, if the patient's blood pressure goes up when it is being measured.

Jeff: With regard to the significance of a patient's thoughts and symbols : they may be unassimilable into the ordinary scientific methods.

Dan: People say "this system works", how does one evaluate paradigms or systems one against the other?

Hobson: (to Jeff) I agree about symbols, it is difficult to assess the meaning of symbols and which is correct. One shouldn't try to solve the problem of symbols before the problem can be solved.

Jeff: But my point is that there's little on the horizon to suggest that it will shortly become amenable to study. We need totally new methods which are within the overall system of science.

Hobson: Yes, that's an important distinction.

Goisman: What is the social role of the psychiatrist? Therapy, philosophy, theology? Do we deal with practical therapy, a craft, versus pondering the meaning of existence. This is not well defined. We can't exist like this forever. Criticism is increasing today. We need to think about this.

Shelly: I think that it is the therapy...that is the reason why it is under attack. Regarding the training programs, Restak wants psychiatry to become more and more specialized; however, many of these problems are not of one entity--not just an affective disorder...my beef with this is what do you do with one individual? A person's problems are multifaceted. People are frustrated if see a number of different psychiatrists and are told different things. I can envision a system where have specialists in all areas of psychiatry, which would be disastrous...generalists would be squeezed out.

Sarah: There is a difference between a psychiatric generalist and a medical generalist.

Jeff: (relates an experience) I saw a patient whose primary caretaker arranged consults by representatives of every school of psychiatry. I couldn't see any way of integrating all this information. But he was doing just what a medical generalist would do.

Goisman: However, psychoanalysts are not generalists...the schools are too isolated.

Green: There is a need for a generalist.

Shelly: Yet there is no model of any psychiatrist who can integrate.

Green: I disagree. Psychiatrists are integrative.

Shelly: Are there people doing that?

Goisman, Hobson & Green: Yes, Yes...we are doing that at MMHC (Massachusetts Mental Health Center).

Hobson: I've used many different methods simultaneously. You need to distinguish the scientific level versus the clinical level...what you do is different from what is written and lectured. You should come down and see what is going on.

Sarah: With regard to psychiatric generalists versus medical generalists, in medicine there is one approach to many organ systems. In psychiatry, it's multiple approaches to one organ system.

Shelly: Integration is a great idea but in reality, will it happen? What are the ways to make it happen?

Jennifer: In psychiatry, people can't identify the specialist they need as easily as they can in other medical fields.

Goisman: The patient would have to diagnose themselves before he sees anyone.

Jennifer: This gives the doctor more control over the patient, once the patient is seen.

Sarah: It is quackery to have psychiatric specialists who would take care of a problem that would be best helped by another specialist.

Green: It is malpractice.

Shelly: In this case need a diagnosis before treatment. I'm not convinced that this happens, psychiatrists treat using their own preferred methods.

Hobson: A potential solution is to set up a group of psychiatrists to work together. First everyone must agree that the enemy is the monolithic theory

Dan: Is Restak's article true in your experience? Is the suicide rate truly one out of six among psychiatrists?

Hobson: Six out of seven deaths were suicide in my class of 120 physicians. In suicide, dentistry is leading, then ophthalmology anesthesiology.

Goisman: I agree with Restak's portrait of the difficulties psychiatry faces in the 80's.

Green: I feel it had a cynical edge to it which it didn't need.

Goisman: The issues which he raises are real.

Shelly: I felt he made an homophobic remark, when he offered homosexuality being taken off the APA's list of mental diseases as an example of how medicine bows to the pressures of changes in society.

Dan: A second example he gives of how medicine is changed by society is the issue of abortion.

Goisman: It is a matter of the politics of diagnosis--Restak looks at the social labelling involved with diagnosis.

Teresa: The classic example is alcoholism being relabelled a disease.

Sarah: Diagnoses in psychiatry are name calling...they are not always helpful in treatment.

Goisman: Another example is the changing of hysteria to histrionic.

Liz: Labels serve some practical purpose for example in reimbursement from Blue Cross/Blue Shield.

Green: It also allows people in the discipline to talk among themselves. For example, manic depressive--a while ago, there was no emphasis on precise diagnosis, and this confused the picture.

Sarah: There is a DSM III term--cyclothymic--what is the use of this term? Is it an unnecessary label for a normal phenomena or a term for a true mental illness?

Green: True, it is not an adequately quantified diagnosis, but it is often important to look for and recognize the trait in a patient.

Goisman: It is useful in treatment. Diagnosis by DSM III criteria in general may be helpful in picking out which school is most useful in the treatment of a certain problem.

Green: But psychopathologic phenomenon are simply often very difficult to rigidly classify. For example, there is the use of tricyclic antidepressants in anxiety disorders--why should this work?

Jeff: The problem is that having labels can blind one to the etiology.

Green: DSM III as a training device can have pitfalls.

Shelly: With symptoms versus etiology, a diagnosis on symptoms can give a treatment which is a judgement call based on philosophy. This is a problem with Dr. Sheehan's treatment of anxiety with tricyclic antidepressants. It is helpful for people to know what medical problem they have. In psychiatry, the opposite is true...after a diagnosis, they now have a label.

Hobson: When making a diagnosis in psychiatry, you are labelling pathology...a maladaptive mechanism. A patient first has a problem, then he or she has a diagnosis and the patients think of themselves as the diagnosis.

Sarah: It is easy in psychiatry to blame the patient for their illnesses, unlike medicine...this is the problem with labelling.

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April 17, 1984

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# THE SOMATIZATION OF PAIN

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Chapter 14  
The Somatization of Pain  
Meeting of 17 April 1984

Presenter: Jennifer Haas  
Host: Steve Stelovich  
Correspondent: Elizabeth Mort

"... I have discovered that I must not only drop exercise, but also mental labor, as it immediately tells on my back. I have consequently made up my mind to lose a year now in vegetating and doing nothing but survive."

Letter to Henry Bowditch, 1869

In attendance were Anya Hurlbert, Jennifer Stone, Chris Austin, Shelly Greenfield, Linda Leum, Elizabeth Mort, Jennifer Haas, Jeffrey Saver, Alan Green, Bob Goisman, Scott Solomon and Steve Stelovich.

Before the discussion got underway we all agreed that a formal note of thanks would be drafted and sent to Stephen Paine. Several members of the seminar were not able to attend the private showing of the Paine's truly unique collection and expressed interest in doing so. Steve Stelovich pointed out that it becomes increasingly difficult to cultivate ones' interests in the arts while pursuing a career in medicine.

Jennifer Haas chose the readings and led the discussion of the somatization of pain. She chose "Social Psychological Factors Affecting the Presentation of Bodily Complaints", by David Mechanic (NEJM May 25, 1972) and "The Prevalence of Somatization in Primary Care" by Kayton, Ries, and Kleinman (Comprehensive Psychiatry, Vol.25, No. 2, March/April 1984). Jennifer began the discussion by suggesting that the somatization of pain is prevalent in every day life, in ourselves and our patients. Katon describes several possible functions for somatization. In interpersonal relationships it can serve to elicit social support, avoid intimacy, express anger, or avoid unpleasant situations. He suggests that somatization can be both adaptive as well as maladaptive. Both articles discuss the variety of ways in which people perceive, describe, respond to, and investigate their pain. It was suggested that self-esteem may moderate both the development of somatization and the response to pain. Jennifer also brought up the impact of mass media on the somatization of pain on the population level. She suggested that we might take any of these ideas as a point of departure into a discussion of somatization.

Chris was struck by how accurate Mechanic's description of the medical students' disease was in his own experience. He has found that bodily symptoms parallel the symptoms of various diseases discussed in the pathophysiology blocks. He has noticed that since he has started Introduction to Clinical Medicine (ICM) and has begun to examine fellow students, he feels that operating on an iceberg of knowledge

has intensified his own experience of the medical students' disease.

Liz asked the physicians present if they have found that the medical students' disease becomes the doctors' disease. Do doctors, who have a broader and deeper medical understanding, still experience somatization?

Bob Goisman related a personal example. When his baby was hospitalized in the ICU, he claimed that he drove himself out of his mind toying with the idea that his child would have permanent retardation after he had suffered a depression of his consciousness at birth.

Jeff claims that he has not yet succumbed to the medical students' disease, but that he transfers the experience on to family members.

Alan Green's experience is one of utter denial. He doesn't somatize. He suggested that medical knowledge imparts omnipotence. Patients, not doctors, get diseases.

Steve described one of his brushes with somatization. Half-way through his internship after having rubbed his eye, he experienced a most terrifying, although only transient, blindness. The differential of stroke, hysteria, etc., went through his mind while he briefly considered carotid arteriograms with their associated morbidity. He decided, at the time, that the event was unimportant, that it was really nothing to worry about. He cited having a tremendous respect for denial. (His transient blindness recurred and was eventually investigated. The diagnosis was related to a family history of migraines and not a cause of concern.)

Shelly had two acute episodes of the medical students' disease this year which not only coincided perfectly with the pathophysiology blocks, but turned out, in fact, to be real and treatable. Her first ailment developed during the GI block. She had stomach trouble which at first she attributed to something akin to medical students' disease. A few barium swallows later it turned out to be a bona fide medical condition. She suggested that we shouldn't write off all our symptoms as hysterical responses to our expanding medical knowledge. Her second experience came during the final exam in neuropathophysiology. Shelly claimed that she always had perfect eyesight, her eyesight was both her and her family's pride and joy. She has no idea what compelled her to check her eyesight during the exam, but sure enough she discovered to her horror that one of her eyes has weakened. She was alarmed at the time, but has yet to consult an ophthalmologist.

Steve explained that he finds emergency medical work very satisfying because, in that situation, one doesn't have time to somatize, transfer symptoms to family members, etc. One can deny all that stuff.

Shelly also referred to another mechanism of defense brought out in one of the articles. It seems that self-esteem is inversely related to somatization. People with a strong sense of self are more resistant.

Alan brought up how difficult it can be for medical students or physicians to present with various symptoms without feeling a little bit like a hypochondriac.

Chris recounted an incident in which he did feel awkward bringing his concerns about his blood pressure to the university health clinic. Two of his friends had recorded elevated levels during practice physical exams. He reluctantly went to the clinic and it turned out that he has "some weird rhythm syndrome".

Jennifer Haas had her own bout during parasitology. All the discussion of parasites being harbored in the body for long dormant periods, and of the various dos and don'ts of international etiquette in developing countries sent her to the health service for a parasite exam. She was concerned because she traveled extensively in the hinterlands of The Peoples' Republic of China last summer. One negative stool sample satisfied her curiosuty.

Jeff brought up another reaction to illness. He claims that when he has symptoms he regresses to a twelve or thirteen year old. Lewis Thomas relinquished his power as a cardiologist when he was suffering from heart disease. Alan Green claimed that he reacted in a similar way during a prolonged illness.

Alan noted that doctors who go to other doctors with symptoms are often asked, well what do you think you have. Sometimes, you just don't know or don't care, but just want someone else to handle the details of the treatment.

Chris asked if this is an example of how doctors supposedly get terrible medical care?

Bob Goisman responded by saying that, as a physician, it is difficult to treat another physician, especially if his or her condition is devastating. Ill physicians challenge the omnipotence that many physicians feel. Ill physicians challenge the treating physicians' mortality. Its a difficult and often awkward situation.

Chris' father, who is a physician, had to instruct a nurse that his lung had collapsed and that he needed to be

inflated. The nurses and doctors appeared to assume, that since Dr. Austin was a physician, he could more or less look after himself.

Scott then asked the group if any of us had any psychological symptoms. He noted that we'd only really addressed our physical symptoms.

Anya claimed that she had a panic attack after listening to a lecture on the subject. Her heart began palpating, the room began spinning and she went off the the health service. A sympathetic nurse calmed her down and she then realized how her symptoms fit together so perfectly with the day's lecture.

Bob Goisman remembered that as a second year medical student studying psychiatry he found himself experiencing early morning awakenings, a decrease in appetite and began worrying that he may be suffering from a depressive disorder. When he reflected on the stress of medical school and realized that he had ample reason to be mildly upset by it all, he relaxed. The symptoms dissipated as he made the transition into the clinic.

Shelly asked if any of the psychiatrists had seen patients who had severe underlying disease which they somatized.

Steve had a patient who presented with terrible migraines which were not responsive to any treatment. They became so painful that she tried to kill herself and she was referred to Steve. It turned out that she had a major depression which had led to her migraines. She is now on an antidepressant and reportedly doing well.

Scott asked if it is possible to rule out somatization in cases where lab tests or other diagnostic measures do not differentiate.

Steve suggested that a family history can be extremely helpful in depression, alcoholism, etc. In eliciting a family history he cautioned to ask about symptoms and not diseases because diagnoses have changed radically throughout the years.

Alan mentioned that family members impressions of the patient's symptoms may reveal that the patient is overreacting or minimizing the symptoms.

- Bob Goisman mentioned that cultural stereotypes may be important. Some cultures reward pain whereas others reward a more stoic approach. Admittedly the application of stereotypes is limited, but may be of some value with some patients.
- Jennifer changed the focus of the discussion by asking about the effects of the media on particularly susceptible people. What is the process that causes mass hysteria?
- Scott wanted to discuss the neuophysiology behind the hysteria. He asked if these mass effects were analogous to a type of hypnotism?
- Steve suggested that a neurophysiological correlate may not be the right substrate to explore. He said that the psychological process involved in mass or group hysteria involves a resonance between the mind and the body.
- Scott then wanted to discuss the origins of hypochondriasis...is it a primary or secondary process?
- Bob mentioned that the term hypochondriasis is more commonly used outside the profession of psychiatry as a pejorative term.
- Alan mentioned that the DSM-III definition of hypochondriasis is a belief in the presence of a physical disease which cannot be confirmed by the relevant medical tests.
- Jeff suggested that hypochondriasis is really an idiom of distress and then asked if the symptoms with which patients present are ever very specific.
- All the psychiatrists present responded in unison, "Oh Yes!". And one went on to cite an example of a patient presenting with chest pain on the anniversary of his father's death caused by an MI. Other examples were cited as well.
- The conversation changed focus again when Scott brought up the question of breast cancer and why women don't do self breast exam. In his ICM experience he has found at least three quarters of the women he has seen do not examine their breasts. Scott was puzzled as to why, when it is so easy and such a good early detection method, women don't do it.
- Shelly brought up the example of medical students who are just as uncomfortable with the exam if not more so than the general population. She said its hard to ask a woman or

even yourself to once a month check to see if you might have a potentially fatal disease. Emotions and denial play a large role.

- Liz brought an example from her ICM experience to the discussion. She said that after learning the male genitalia exam she asked the urologist preceptor if he recommends that his patients do testicular exams every month? He said that he recommends it, but he doubts that many of his patients actually pick up on the suggestion. Its the same phenomenon in both men and women. People don't want to brush up with mortality on a monthly basis.
- Alan suggested that we ask our patients to do more than they can do or more than we as physicians do.
- Steve wondered how many physicians check their blood pressure as they grow older.
- Jeff brought the conversation back to the central issue and asked what are we to do in order to treat somatic complaints that have a psychiatric basis.
- Bob said it is crucial to talk in the same language as the patients to get at the root of the psychiatric problem and that it is also essential to rule out any organic illness before the diagnosis of a psychiatric etiology is made. If a patient comes in talking about his nerves, you can't sit there and question him about his feelings. You have to communicate.
- Steve mentioned that if we do away with somatization, there will be another language or way of communicating. Perhaps smashing windows will replace somatization suggested Bob.
- Jennifer did some work on chronic pain in a psychiatric hospital in China. Jeff asked her how the Chinese were dealing with talking about their chronic pain to Western-modeled physicians after centuries of recourse solely to the Chinese academic-medical and folk-health traditions.
- Jennifer said that people responded to their chronic pain in a variety of ways. Some looked to western medicine as a panacea and others were not as receptive and remained silent. The patients she saw presented with a wide rang of emotional responses.
- Bob filled us in on a recent concept advanced in psychiatric circles--alexithymia--which describes patients who have no words for feelings.
- Steve suggested that the term applied to second year medical students who were at a loss for words to describe emotion. He noted that when he lectured to the second year psychiatry class, half of the students were unable to come up with more than ten words for emotion in a minute.
- Shelly defended the class by suggesting that perhaps people were not sure of the definition of emotion, for example, how do emotions differ from mood, is there overlap, are different terms redundant for essentially the same emotion.
- Chris Austin again turned the discussion back to Jeff's question about our role in the treatment of hypochondriacs. Is it feasible or reasonable to support a full medical work-up when faced with a person who is most likely somatizing?
- Shelly thought that the point of the articles was to get MD's to consider a psychiatric etiology in the differential

diagnosis. All doctors must be trained to see beyond the physical.

- Alan suggested that one approach in a primary care setting is to use your judgment, and, if appropriate, hold off performing high-tech tests at first. If the complaint is somatic and transient and you go ahead and schedule your patient for an upper and lower GI, a CT scan and who knows what else, you may only perpetuate a condition that otherwise might have dissipated for one reason or another.
- Steve suggested that we really need to acquaint physicians with depressive illness which plays an important role in many somatic complaints.
- Bob stressed that it's ok to tell your patients that they don't have to be ill in order to have a relationship with you. Sometimes people maintain their symptoms just so that they can legitimate their visits to the doctor.
- By way of example, Alan cited a hypertensive patient who came to see him every three weeks to "fine tune" her hypertensive medications. He said she would have done fine with a visit less frequently, but she presented with a new complaint every three weeks. He thinks she needed the frequent contact.
- Chris was disgruntled in that he feels our medical education doesn't address this issue.
- Linda Leum, in contrast, has been pleasantly surprised in her ICM experience. Her preceptors have encouraged her to talk to the patients and find out what makes them tick. She loves doing it but feels that, when she becomes busier during her clerkships, she won't have the time to devote so much attention to each and every patient. She said that it's hard to meet the needs of the patients when they want you to be their mother, their father, or their entire social support network.



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May 16, 1984

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# THE NATURE OF LOVE

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Chapter 15  
The Nature of Love  
Meeting of 16 May 1984

Presenter: Sarah Feldman  
Host: Allan Hobson  
Correspondent: Sarah Feldman

"Every Jack sees in his own particular Jill charms and perfections to the enchantment of which we stolid onlookers are stone-cold. And which has the superior view of the absolute truth, he or we? . . . Is he in excess, being in this matter a maniac? Or are we in defect, being victims of a pathological anaesthesia as regards Jill's magical importance? Surely the latter; surely to Jack are the profounder truths revealed; surely poor Jill's palpitating little life throbs are among the wonders of creation, are worthy of this sympathetic interest; and it is to our shame that the rest of us cannot feel like Jack."

"What Makes A Life Significant," 1899

### Reading: "My Mistress" by Laurie Colwin

The final William James session of the 1984 academic year met at Allan Hobson's home and discussed the nature of love--a topic with an intentionally unclear meaning. The reading by Laurie Colwin was a short story originally published in Playboy which describes the narrator's relationship with his mistress and, at times by comparison, with his wife. The story focuses on the great differences between these two, on the intense feelings the narrator feels for his mistress, but ends by supposing that one day his affair will end, despite these intense feelings. The story seems to suppose that neither the narrator's nor his mistress' marriages will end, nor even be affected, by this intense affair.

The meeting started with the moderator, Sarah, reading excerpts from Vera Brittain's autobiography, Testament of Youth, in which she describes her first and most passionate experience of falling in love with a young man during World War I who was subsequently killed. The description captures the most intimate details of their experience. In particular, she describes in very insightful detail the nature of the conversations that cause young people to fall in love (immortality, analyzing each other's characters) as well as the details of the situation (the spring afternoon talk over a 10 mile walk).

After reading these excerpts, Sarah went on to raise questions about the definition of the word love. Is passionate "love" the same as family "love?"; Is first "love" (pure) the same as adulterous "love?"; etc. Many of the members of the group were quite dismayed at the choice of the short story as the basis for a discussion on love. This story is not about love, they argued, it is about passion and adultery. One faculty member discussed the stages that a relationship goes through from passion to calm understanding. He cited the case of a friend of his who is never able to maintain a marriage past the passion stage, always searching again for the lost passion. The faculty member felt that in mature love relationships one accepts the changes and learns to adjust to a new kind of love. Some members argued that the passionate high one feels at the start of a new relationship is not love. The group also discussed differences between "male" and "female" experiences--the concrete versus the more esoteric components of love.

Unfortunately since no tape or notes exist, the rest of the discussion which focused on romantic love (never touching on familial or friend love) is lost.



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July 23, 1984

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# THE NATURE OF LOVE II: RELATIONSHIPS

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Chapter 16

The Nature of Love II: Relationships

Meeting of 25 July 1984

Host: Jeffrey Saver

Correspondent: Jeffrey Saver

"For Jack realizes Jill concretely, and we do not. He struggles toward a union with her inner life, divining her feelings, anticipating her desires, understanding her limits as manfully as he can. . . . Whilst we, dead clods that we are, do not even seek after these things, but are contented that that portion of eternal fact named Jill should be for us as if it were not. Jill, who knows her inner life, knows that Jack's way of taking it--so importantly--is the true and serious way; and she responds to the truth in him by taking him truly and seriously, too. May the ancient blindness never wrap its clouds about either of them again!"

"What Makes A Life Significant," 1899

READINGS: 1) "Conclusion" from American Couples: Money, Work and Sex, Philip Blumstein and Pepper Schwartz, Morrow, 1983, pp. 318-330.

2) "Marriage and Divorce", Paul Bohannan, in Comprehensive Textbook of Psychiatry/III, Harold Kaplan and Benjamin Sadock, eds., Williams and Wilkins, 1981.

IN ATTENDANCE: Steven Denlinger, James Gaudet, Jeffrey Saver, Ebbie Stewart, Kay Young (a guest of the seminar)

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The course of true love never did run smooth. Nor that of a longitudinal interdisciplinary seminar in mind-body interaction. With most seminar members still adjusting to the (welcome) shock of the clinics and others on summer vacation, it was a small but hardy band that gathered on July 25, 1984 to continue the group's exploration of that most sublime of mysteries, the nature of love. Making a virtue of necessity, the group took full advantage of the opportunity afforded by its more congenial size to bring up matters of personal experience as well as more general views in the evening's discussion.

Members began the meeting by expressing uniformly negative reactions to the readings. As Steven pointed out, the selections were rather sociologically heavy-handed, and failed to capture the diversity of different individuals' experiences of love and the complexity of the varied relationships that grow out of love. Jeff noted that the excerpts from a psychiatry textbook and a recent sociological survey had been chosen in part to complement the literary approach to the topic provided last month, but also to provoke just such an indignant response from members. It was hoped the group might be prompted to try to specify what it is about love that eludes sociological and general theoretical explanation. However, members soon found it more profitable to turn to the fertile observations contained in a letter Allan Hobson had mailed in as a contribution in absentia to the evening's discussion.

The discussion moved in a new direction when Ebbie noted that our peers in medical school and out no longer seemed to fall head over heels in love. Was this, Steven asked, because career demands left less room for personal lives? Or, wondered

Jeff, because we had become older and "wiser" in that worst sense of no longer being willing or being able to share ourselves wholly and fearlessly with another. In any case, it seemed to Ebbie that many had started down the path to choosing a significant other on the basis of a companionable compatibility, not passionate love. The group next briefly discussed the future of marriage as a social institution and concluded that it was here to stay for, as James pointed out, it alone could draw upon a religious and societal tradition to provide a sense of permanence to a couple's love. Steven raised the subject of the so-called "New Man"--the sensitive, successful, active young professional unable to commit himself to love. Kay Young observed that the reason this phenomena affects men more than women might be traced to the different developmental psychological trajectories of the sexes. Psychologist Carol Gilligan has argued that whereas women tend to display an early concern with relationships and intimacy, men recognize and confront these tasks only late in their development.

These are only some of the highlights of the group's wide-ranging and provocative consideration of love in our time. At the evening's close, members agreed that, despite, or even because of, its smaller size, this first meeting of the new Seminar year had been thoroughly enjoyed by all present.

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August 15, 1984

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# DEATH AND DYING

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Chapter 17  
Death and Dying  
Meeting of 15 August 1984

Presenter: Elizabeth Mort  
Host: Robert Goisman  
Correspondent: Elizabeth Mort

"Our troubles lie indeed too deep for that cure (healthy-mindedness). The fact that we can die, that we can be ill at all, is what perplexes us. . . .

. . . In the practical life of the individual, we know how his whole gloom or glee about any present fact depends on the remoter schemes and hopes with which it stands related. . . . Let it be known to lead nowhere, and however agreeable it may be in its immediacy, its glow and gilding vanish. The old man, sick with an insidious internal disease, may laugh and quaff his wine at first as well as ever, but he knows his fate now, for the doctors have revealed it; and the knowledge knocks the satisfaction out of all these functions. They are partners of death and the worm is their brother, and they turn to a mere flatness.

The Varieties of Religious Experience, 1902

I chose the topic of death and dying for our August 1984 seminar after having been in the hospitals a couple of months and after having seen pain, suffering, and death in a new light. I wanted the opportunity to discuss some of my own reactions with the group. I also wanted to talk about some of the more or less universal aspects of death and dying experienced by the dying individual and to explore the patterns of bereavement and the defenses seen in family members and friends of the dying.

The Tolstoy classic, "The Death of Ivan Ilych", examines the process of death and dying through the eyes of Ivan and through the eyes of his friends, his wife, his son, and his doctor. I thought it would be instructive and interesting to read, or reread as the case may be, the story and use it as a focus for discussion.

The group discussed how Ivan Ilych, not surprisingly, demonstrated a full range of emotional reactions to his illness. We used Elizabeth Kubler-Ross' scheme of defensive behavior:

- He initially expressed denial: "The pain did not grow less, but Ivan Ilych made efforts to force himself to think that he was better. And he could do this as long as nothing agitated him."
- He expressed anger: "Anger choked him and he was agonizingly, unbearably miserable. 'It is impossible that all men have been doomed to suffer this awful horror!'".
- He began to bargain: "He remembered his medicine... 'I need only take it regularly and avoid all injurious influences. I am already feeling better, much better.'".
- He became morbidly depressed: "He wept on account of his helplessness, his terrible loneliness the cruelty of man, the cruelty of God, and the absence of God."
- Ultimately, after three days of continuous screaming, he accepts his fate: "He sought his former accustomed fear of death and did not find it. 'Where is it? What death?' There was no fear because there was no death. In place of death there was light."

We focused a bit on how Ivan was able to finally accept his death with even a certain degree of inner peace and calmness. After a long period of miserable suffering the awareness that his schoolboy son was kissing his hand seemed to be pivotal. In addition, toward his final moments, he made some references toward a God when he said, "He whose understanding mattered would understand." Generativity and religion seemed to play an important role in his process of reconciling his life. Members of the group talked about the inner comfort they derived from their marriages, their children, and/or their religious faith. Ivan Ilych took solace from these elements of life a little late, but still in time to achieve a sense of closure.

We also looked at the way Ivan Ilych's friends, his doctor, and his family reacted to his death. Of his near acquaintances: "Each one thought or felt, 'Well, he's dead but I'm alive!'". His wife, "began to wish he would die; yet she did not want him to die because then his salary would cease...She considered herself dreadfully unhappy...". The doctor, "said that so-and-so indicated that there was so-and-so inside the patient, but if the investigation of so-and-so did not confirm this, then he must assume that and that. If he assumed that and that, then...and so on. To Ivan Ilych only one question was important: was his case serious or not? But the doctor ignored that inappropriate question.". We discussed the implications of these adaptive strategies or patterns of bereavement for both the dying and his friends, family and caretakers.

We shared among ourselves some death and dying experiences both in and out of the hospital, some heartwarming, others horrifying and tragic. We returned for a moment to the story of Ivan Ilych and concluded that it was certainly preferable to have a handle on our own mortality a little earlier than did poor Ivan Ilych.

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September 19, 1984

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# STRESS AND MEDICAL LIFE

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Chapter 18  
Stress and Medical Life  
Meeting of 19 September 1984

Presenter: Tal Laor  
Host: Dan Barboriak  
Correspondent: Jennifer Stone

"Medicine would pay, and I would still be dealing with subjects which interest me--but how much drudgery and of what an unpleasant kind is there!"

Letter to Katherine James Prince, 1863

READINGS:

S.P. Kucher: "Coping with the stresses of medical education." Can Med Assoc J, Vol. 130, 2/15/1984, pp. 373-374.

Charles LeBaron: Gentle Vengeance pp. 61-65.

B.S. Linn & R. Zeppa: "Stress in Junior Medical Students: Relationship to personality and Performance." J of Med Ed, Vol. 59, Jan. 1984, pp. 7-12.

J.D. McCue: "The Effects of Stress on Physicians and their Medical Practice." New Eng J of Med, Vol. 306, No. 8, 2/25/1982, pp. 458-463.

G.W. Small: "House officer stress syndrome." Psychosomatics, Vol. 22, No. 10, Oct. 1981, pp. 860-864.

IN ATTENDANCE: Steven Denlinger, Scott Solomon, Val Slayton, Liz Mort, James Gaudet, Paul Unger, Jeffrey Saver, Tal Laor, Dan Barboriak, Jennifer Stone, Robert Goisman, Alan Green, and Allan Hobson.

SUMMARY: Our discussion on stress and life came at an appropriate time right before beginning our 4th month of clinical rotations. As students and faculty members had time to reflect on their experiences, many stories during the evening were told about how individuals have felt personally stressed on the wards.

Tal opened the meeting by asking if we felt we adapted to stress or if we felt continually stressed as we attempted to live up to a specific role. She mentioned an experience that she had while trying to take an arterial blood gas from a patient. As time elapsed, she realized that a friend waited for her for dinner. Tal pointed out that stress arose from the conflicting demands placed on her. With this scenario she demonstrated various factors which collectively contribute to our perception of stress: 1) one's own self-imposed desire to do well, 2) the lack of time for one's self, family, and friends, and 3) the vast amount of material to be learned.

Others also mentioned that stress comes from the nature of being a student. For example, students often do not know what is expected of them. They must learn from experience, and during this learning process they may inflict unnecessary pain on their patients. Students are often forced to straddle the line between competence and incompetence.

As we talked, we realized the need to define stress. What do we mean, when we say we are stressed? Is it the condition or is it the response? Scott mentioned that W.B. Cannon said that

stress is a physiological response to a difficult situation: a response, not a stimulus. Other participants wondered if we could differentiate between coping with stress versus coping with conflict or if we could differentiate between the psychology of stress versus the physiology of stress that we can observe and quantify.

We then discussed the nature of medical training. LeBaron suggested in Gentle Vengance that compulsive behavior in the first two years is necessary for survival. Bob remarked how medical school education is a set-up for a cannibalistic approach--in order to pass and to be above the mean, students must be aggressive and make certain sacrifices. It was then suggested that students must develop this kind of cannibalistic character in order to succeed. The question arose as to how this character manifests itself in physicians who are themselves a product of the medical education system. Examples in the discussion included those superiors who fire questions and project their own stress toward the inexperienced medical student.

The discussion then turned to ways that students might effectively manage these stressful times. Suggestions for managing stress included: 1) forming student alliances, 2) developing a rapport with the residents, and 3) being cooler and more objective than your supervisor.

At the end of the meeting we discussed how stress might be useful to a student. Most WJS members felt that some stress, or anxiety, can be educational. However, with too much stress, one may shrink away, become depressed, and give up. Let's hope instead that we can occasionally step back and put our stressful situations into a more healthy perspective.

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October 17, 1984

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# MADNESS

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Chapter 19  
Madness  
Meeting of 17 October 1984

Presenter: Scott Solomon  
Host: Scott Solomon  
Correspondent: Scott Solomon

"To the man who has been insane and come back from it should not the tranquil confidence of most people in the absoluteness of their sane consciousness have an almost ghastly effect? It too is special, and as it were accidental, around it an ocean of undreamt of (or of only dreamed of) possibilities, whose imminence the crazy man realizes all the time. The sane are blind then."

Personal note among James' papers, undated

The readings consisted of Freud's Dr. Schreber case and a selection from the book MADNESS AND THE BRAIN by Solomon Snyder.

After a brief introduction by the moderator describing his background with experimental animal models of psychosis, in which he induced "psychotic-like" states in rats by administering amphetamine, the discussion was opened up to attempt to reconcile traditional views of madness and some of the recent attempts to better understand the biology of madness.

Jeff Saver began by remarking on Freud's incredible ability to "enter into the scheme" of madness and how the mental status exam that we were used to including in our physical exam fell far short of being able to generate the type of insight that was necessary to really understand a psychotic mind.

Chris Recklitis, a guest to the seminar, remarked that Freud approached Schreber's psychotic process in the same way that he would approach a healthy mind and that his basic supposition was that the psychotic mind is one bound by the same basic "rules of order" that bound the healthy one; the processes differed only in degree.

In another approach to the question of whether the psychotic and healthy minds were simply two sides of a spectrum or, in fact, represented qualitatively different processes altogether, Scott Solomon remarked that conventional forms of psychotherapy were so inadequate in alleviating the problems of the psychotic mind, while non-psychotics often could be helped by this form of therapy. Steve Stelovich agreed that "they never leave the hospital when they're psychoanalyzed... they can stay as crazy to you and me as they've ever been." Alan Green suggested that it really depends what you are trying to measure in that some types of psychosis can be thought of as a degenerative process, citing evidence of organic degenerative processes in the brains of schizophrenics. Psychotherapy, he argued, could alleviate some of the symptoms in these patients without, of course,

approaching the underlying pathology. In psychotherapy of schizophrenics, he said, you simply have to "help them bear the affect... and the craziness will disappear to some extent." One definition of madness, he offered, might be the inability to tolerate an affect.

"The pills cleared the hospitals," remarked Steve Stelovich, but he remembered one particular patient for whom it was not pills but another modality of treatment that ended her psychosis. This was a case of an unpleasant lady that "drove the doctors so crazy" that they tied her in a bag, five minutes the first time, ten minutes the second time, twenty minutes the third time and so forth. Her behavior got much better, apparently; "she was cured," so far as the therapists were concerned. But she remarked, "I don't do those things anymore...I've lost my soul."

Alan Green remarked that if the dynamic explanation offered by Freud of Schreber is correct, what does this tell us of the etiology of this disorder. For many years, he added, people thought it had to do with "bad mothering" or "double-bind" situations. Steve Stelovich finds it a particularly difficult problem to approach. He brought Schreber's memoirs to the meeting and told how one psychoanalyst in the 50s and 60s, Neederman, decided to investigate the history of the Schreber family to better approach the problem of Schreber. Schreber was a man who thought that the world was dying out, and that God was working a series of miracles on him, horribly painful miracles, and he didn't know why they were occurring on him, and finally realized that he was being changed into a woman. This miraculous process was excruciatingly painful for him, as described in his memoirs. Freud suggested that the basis for understanding these bizarre delusions rested in an understanding of the relationship between Schreber and his father. The father, Steve added, was an orthopedist who believed the human race was becoming "too soft" and developed a series of contraptions that his child would wear which were designed to "toughen the integument." Apparently he had other methods to "toughen the integument" including hot and cold baths. Steve Stelovich suggested that almost all of the delusions which appeared later in the life of Schreber could be traced back to this bizarre relationship with his father. There was, he added, some concern at the time for the sanity of Schreber's father.

Are you suggesting then, asked another student of Stelovich, that schizophrenia is a totally environmental problem.

On the contrary, Stelovich asserted, I believe it's totally biological, "I'm convinced of it."

Alan Green shared the experience that he and Scott

Solomon had had the day before going to the acute unit of the Massachusetts Mental Health Center where they saw a patient who was billed by the chief resident as a schizophrenic but in fact probably had temporal lobe epilepsy. Here, Alan claimed, we had a known organic process that could lead to the development of a psychosis. What, he added, is the explanation for acute psychoses that occur in times of stress? Clearly, there are many things which we call "psychosis" or "schizophrenia." The important question, he added, is how are they related.

Chris Austin argued that at some level there has to be a biologic basis for schizophrenia. What is most interesting, he suggested, is that normal people can under certain circumstance suffer from similar symptomatology. Does this imply that the pathology is the same? Scott Solomon went on to ask if many people in the psychiatric community felt that a biologic understanding of schizophrenia could be arrived at, to which Steve Stelovich replied "where would we find that community?"

Alan Green talked about change in the feeling of the community over the past 10 to 15 years towards a biologic approach to schizophrenia but warned of the danger of pinning too much on any one biologic model since there are so many different types of schizophrenia, which share similar attributes but are certainly not the same disease, and since there are so many models of schizophrenia. What he added, is the significance of the fact that a proportion of users of the drug PCP go on to become chronically psychotic. While this clearly suggests a biologic interpretation of psychosis, it does not really provide a mechanism and does not offer much insight into the pathogenesis of de novo "schizophrenia."

Sarah Feldman remarked that such a high percentage of people with schizophrenia have unusual family backgrounds. The psychiatrists in the group in unison offered the "chicken and the egg" analogy underlying the futility of trying to understand the causality of this relationship. Sarah continued to talk about the genetics of schizophrenia, citing an incident during a genetics rotation when a family came in for genetic counseling about the likelihood of having a psychotic child given the high rate of mental illness in the family. The genetic data, Alan Green remarked, is quite convincing, suggesting that there is a very strong genetic factor in schizophrenia, although it does not follow a clear-cut mendelian pattern.

The discussion turned to the inability often to distinguish other forms of Madness from schizophrenia. Regardless of the underlying pathology of the madness, Jeff Saver remarked, there seems to be stereotypical patterns of presentation of madness of a variety of etiologies. How can such a disordered biologic system,

he asked, produce such an ordered, if bizarre, symptomatology, and what does this say about the processes that occur in the normal mind. Alan Green told that he had always been intrigued by the similarity in the processes between schizophrenics and normal minds. Jeff Saver felt that if one part of the system were disordered while the other parts of the system were normal, the result would be normal responses to some disordered information.

Scott Solomon asked if the problem in madness is the perception or the thought disorder which alters the perception. Could the thought disorder simply be a product of the hallucinations, could they, in fact, develop to explain the bizarre perceptions.

The session ended with a discussion of "madness-like" experiences that we've all experienced, including hallucinations that occur when we're tired, or our elaborate attempts to explain certain circumstances that occur in our life, that can approach paranoid behavior. While there was no clear consensus, many people at the session seemed to be struck by the similarity of mental processes that can occur in persons who are labeled mad and persons who are labeled normal, suggesting that a better understanding of the biology and the behavior of madness might contribute to a better understanding of the biology and behavior of sanity, and vice versa.

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November 14, 1984

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# BECOMING A DOCTOR: ISSUES IN SOCIALIZATION

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**Chapter 20**

**Becoming a Doctor: Issues in Socialization**  
**Meeting of 14 November 1984**

**Presenter: Shelly Greenfield**

**Host: Sarah Feldman**

**Correspondent: Sarah Feldman**

"Already at the age of twenty-five you see the professional mannerism setting down on the young commercial traveler, on the young doctor, on the young minister, on the young counselor-at-law. You see the little lines of cleavage running through the character, the tricks of thought, the prejudices, the way of the 'shop,' in a word, from which the man can by-and-by no more escape than his coat-sleeve can suddenly fall into a new set of folds. On the whole, it is best he should not escape. It is well for the world that in most of us, by the age of thirty, the character has set like plaster, and will never soften again.

"Habit," *Principles of Psychology*, 1890

Readings: Light, Donald "The Moral Career of the Psychiatric Resident" from Becoming Psychiatrists/Mumford, Emily "Norms and Counternorms" from Interns Merton, R.K./Lief, Harold & Fox, Renee "Training for 'Detached Concern' in Medical Students" from Sociology of Medical Education, Lief and Fox.

Members Present: A. Green, B. Goisman, S. Greenfield, P. Unger, L. Learman, J. Gaudet, J. Haas, V. Slayton, J. Saver, S. Feldman.

Shelly began the meeting by discussing why she put the packet of readings together. She likened it to the cross-cultural medicine meeting she ran last year. She pointed out that the thing that most struck her while doing medicine (her first clerkship) was that she initially identified with the patient, but at the end of 3 months she walked out with her identification heading much more strongly towards the profession. The forces are powerful, one has no time to think and one can change in undesirable ways. Shelly read an excerpt from her diary written in the 6th week of the first year of medical school: "'The patient presents with' . . . I wonder who "the patient" is . . . formerly it was just a person; now its a patient. 'Patient' is nonspecific . . . perhaps conferring a neutrality . . . confers a distance . . . it's no longer the person next door . . . no longer an oddity to hear 'patient.'" The language is the first step. Shelly then discussed the readings briefly.

Paul commented that to the "naive view" the article on Psychology & Sociology was helpful. Lee disagreed arguing that the two fields are not really that clean cut. Shelly asked what are the psychological mechanisms for detachment? Much is the social structure, she pointed out. Lee asked Shelly if she attributed her behavior to social pressures or to changes from within. Shelly said she looked at it overall.

Alan G. likened the personal changes to being in a mold which gives you a structure enabling one to maintain stability in the face of awful disease. He gave the example of the woman who called him for information regarding CMV to which he was able to give a detached "medical" answer.

Shelly commented that feelings get buried as people bury themselves in cutting and doing, but there are other ways to deal with feelings. When you get involved technically you may miss the point.

Alan pointed out there may be some value in cutting and doing. Paul said he preferred good technique to good bedside manner. Bob argued that this statement is used too much as an excuse to avoid interpersonal skills.

Alan asked if maybe there's a need for people who concentrate all on one part of disease.

Lee returned the discussion to the issue of socialization and asked about people who are not aware of socialization or who don't talk about their feelings.

Bob asked what admission committees select for, as they are the "gatekeeper" for the socialization process.

Jennifer described autognosis rounds at the MGH in which a psychiatrist would talk to the team. The resident was hostile to doing this and ~~she~~ came to sympathize with the resident.

Paul described the admission process at McMaster in which essays are graded for certain qualities and where group tutorials are simulated with applicants.

Sarah cited the example of a shy friend who had a difficult time interviewing for medical school and concluded nice shy people don't necessarily interview well.

Lee asked if one can go through and keep oneself satisfied? Alan replied yes but there are certain choices you don't have. Jeff commented that you can't stay the person you are now and that he is shocked at how quickly the transformation takes place.

Sarah gave the example of the term "unidspmale," which she originally thought must be a patient's genuine name, employed to identify all male stabbing victims from the first to the last day of her surgery rotation. (For the uninitiated, "unidspmale" stands for "unidentified Spanish males.")

Jennifer noted her discomfort with calling herself "Dr." which has changed since starting medicine.

Paul commented on our dress.

Shelly asked when you start to play the role.

Val commented that a patient told him that he had gotten more information from Val than from anyone else.

Bob asked if its ok to call oneself "Dr." if it will get results or information for the patient (from another source).

Jennifer replied that then it would be the intern's responsibility, not hers.

Paul said he'd have no problem calling himself "Dr." or signing his intern's name.

Sarah noted that men seem to be more comfortable doing that than women.

Lee commented that some people are buying right into the socialization by already calling themselves "Dr.".

Jeff wondered what happens June 30, 1986?

Shelly noted that it is ok for a patient to call you doctor if you have an established alliance and they know you're a student.

Jennifer recalled an occasion in which she said "I think Mrs. G. is dead." The fellow said "I heard you made the right diagnosis." And that was the whole discussion.

Shelly commented that she heard a discussion of death only once on rounds . . . it concerned a patient with AIDS, and Shelly found it cathartic.

Sarah commented that a patient doesn't seem like an individual or a person, but rather is only a "patient."

Alan noted that that changes when you're out of training and see people in their street clothes in your office.

Lee wondered why medical school is so inpatient oriented. This issue was discussed by several members of the group and Shelly concluded that being in the hospital causes you to pick up all sorts of things about being a doctor. She also wondered, however, why there can't be more reminders that there's a person under the sheet.

Paul noted that you can always blame it on someone else. You have to have a certain ideology of your own.

Jeff said yes, but you also accept responsibility to change the profession in certain ways.

Lee asked if any of us might become the attendings who think the system's fine.

Sarah said that just helping people to ask the right questions about medical school and about the profession might help students, such as asking oneself "why do we take Anatomy?" thereby focusing attention on various aspects of the socialization process as it occurs.

Paul responded that one should ask those questions oneself.

Lee asked why should medical students have to take more responsibility for attitudes than for knowledge or skills?

Jeff noted that as attendings we'll be just as enmeshed in social incentives as medical students.

Lee commented that attendings may be selected for certain characteristics.

Bob noted that different hospitals attract people espousing different values as do different specialties.

Sarah stated that females have to overcome 2 stereotypes ("female" and "doctor"), not just one ("doctor").

Paul cited a study by Carol Gilligan on action oriented (boys) versus process oriented (girls) behavior.

Lee commented that some female attendings project the attitude "I've made it in a man's world" and that that bothers him.

Paul said it troubles him that there is reverse discrimination against men.

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December 12, 1984

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# IDIOSYNCRACIES OF CULTURE: SHOULD WE ATTEMPT AN EXPLANATION?

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**Chapter 21**

**Idiosyncracies of Culture: Should We Attempt an Explanation?**  
**Meeting of 12 December 1984**

**Presenter: Linda Leum**

**Host: Val Slayton**

**Correspondent: Elizabeth Mort**

"Reason deals with consistencies only, truth with consistencies plus facts; belief is itself a part of fact and a part-maker of fact, life includes all these elements and rolls reason along in its flood--enveloping it, not enveloped by it."

Letter to Benjamin P. Blood, 1907

(Attending this meeting were Linda Leum, Val Slayton, Liz Mort, Allan Hobson, Steve Stelovich, Chris Austin, and Scott Solomon.)

Linda's topic flowed naturally from earlier discussions of cross-cultural issues in medicine, (a favorite WJS topic), during which many of us discussed our own cross-cultural experiences, medical and otherwise. Linda chose as readings three chapters from Cows, Pigs, Wars, and Witches: the Riddle of Culture, by Marvin Harris. These chapters provided us with a semi-formal conceptual approach to cultural anthropology using the example of status in society. The readings also examined the role of witchcraft and mysticism in society.

In the first chapter, "Potlatch", the author addresses the issue of status in different cultures. Harris puzzles over the western world's drive for prestige. He compares several cultures' approach to consumption and status and discusses how these patterns assure production and distribution of wealth. He talks about western societies' "grand-scale conspicuous consumption and conspicuous waste in order to impress their rivals. Sometimes this competition grows so fierce that it appears to become an end in itself. It is amazing how much effort people are willing to spend to obtain . . . the vicarious thrill of being mistaken for members of a class that doesn't have to work." Harris contrasts this familiar pattern with the practices of the Kwakiutl, the original inhabitants of Vancouver Island, for whom, "inconspicuous consumption replaces conspicuous consumption." In fact there is no competitive accumulation of goods. In contrast, rival feasts are held in order to give gifts away. Goods are even destroyed in order to gain status. He also describes the Kalahari bushmen in Africa who shun those who boast of their wealth. "We refuse one who boasts, for someday his pride will make him kill somebody. So we always speak of his (goods) as worthless. This way we cool his heart and make him gentle." He goes on to discuss the economic and social utility of these patterns.

We all discussed the importance of dispelling ethnocentric biases in general, but specifically in our dealings with patients. Pain, shame, guilt, blame, suffering, mourning,

and reacting to death assume different forms for different people. A working knowledge of some basic cultural differences or at least an open mind ready to expect the unexpected are critical.

In the next chapter, "Broomsticks and Sabbats", Harris discusses the history of witchcraft. "Virtually every society in the world has some kind of witchcraft." Although, the interest in witchcraft has waxed and waned. "In fact, the Catholic Church originally insisted that there were no such things as witches flying through the air. In the year 1000 A.D. it was forbidden to believe that such flights really took place; later after 1480, it was forbidden that they did not take place."

And in the final chapter, Harris talks about the "Return of the Witch" in modern day counter-culture through all kinds of "occult and mystical specialties, ranging from astrology to Zen and including meditation, Hare Krishna and the I Ching, an ancient Chinese system of magic. In the lifestyle of the counterculture, feelings, spontaneity, imagination are good; science, logic, objectivity are bad. Its members boast of fleeing objectivity as if from a place inhabited by plague." He in fact argues that we "must regard the expansion of scientific objectivity into the domain of lifestyle riddles as a moral imperative."

We reflected on the role of witchcraft in medicine and especially on the needs for "imagination, spontaneity, and imagination" in dealing with patients. We considered examples of how inter-cultural differences influence patients' responses to their illnesses. And in understanding those differences and in analyzing our reactions to those differences, there seems to be a compelling argument for a certain kind of sensitivity - perhaps a certain kind of magic.

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January 16, 1985

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# TOWARD A SCIENCE OF THE ART OF MEDICINE

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Chapter 22  
Toward A Science of the Art of Medicine  
Meeting of 16 January 1985

Presenter: Lee Learman  
Host: Jeffrey Saver  
Correspondent: Val Slayton

"Many persons nowadays seem to think that any conclusion must be very scientific if the arguments in favor of it are all derived from twitching of frogs' legs--especially if the frogs are decapitated--and that, on the other hand, any doctrine chiefly vouched for by the feelings of human beings--with heads on their shoulders--must be benighted and superstitious."

Notes for Lowell Lectures on "The Brain and the Mind," 1878

The meeting was held at the home of Jeffrey Saver, and was presented by Lee Learman. The three readings were (1) "Patient Behavior in Hospitals: Helplessness, Reactance, or Both?" by Raps, Jonas, Peterson, and Seligman in the Journal of Personality and Social Psychology. (2) "The Emergency Room", from The Unkindest Cut: Life in the Backrooms of Medicine by M. Millman. (3) "The Art of Medicine" from Social Psychology and Medicine by M. Dimatteo and H. Friedman. The following members were present; Lee Learman, Jeff Saver, Jennifer Stone, Val Slayton, Allan Hobson, Alan Green, Bob Goisman.

Lee opened the meeting by reviewing the three readings. He noted that one of the readings, The Unkindest Cut, portrayed medicine in a bad light, and prejudiced many people in the medical profession against social scientists. He posed a number of questions: do social scientists have a place in medicine; can the Art of Medicine be taught to students; can the Art of Medicine be taught scientifically; what methods of teaching would work best in this context?

Jennifer said that she began to realize the importance of the Art of Medicine when she entered ICM (Harvard Medical School's Introduction to Clinical Medicine Course). Only when she stepped past the basic science of symptoms was she able to relate to her patients. Often, the interns were too busy to talk with patients, and Jennifer was the only one who had the time to talk.

Lee asked if the medical school should put more effort into teaching the Art of Medicine and social science more rigorously. Alan G. and Allan H. asked if the Art of Medicine differed from the use of social science in Medicine, and asked if the Art of Medicine could be defined. Jennifer responded that she thought that the Art of Medicine meant communicating with patients, and sharing feelings with patients. Lee pointed out that many aspects of non-verbal behavior also were important.

Bob Goisman questioned whether social psychology could provide techniques for studying the Art of Medicine. Lee suggested that while social psychology provided a good data base for this study, it was not the only possible discipline; Anthropology and Sociology could also be effective in this area. Bob noted that drama or literature also were valid techniques.

Allan H. asked if the Art of Medicine was taught during the first year of school at all. Allan remembered an arrogant professor of his when he was a medical student vividly, and wondered what impression of the Art of Medicine such professors provide through their personalities. Val said that such professors were the opposite of role models for him. Jeff added that it was a form of teaching through contrast. Allan wondered if this was like "revealing Christ by revealing the Antichrist".

Val related a story from one of the first clinics during the student member's first year of Medical school. A professor presented a patient who had an ostomy, and was not at all aware of the possible embarrassment and discomfort of the patient. This heightened Val's awareness of patients' feelings, since

he (and most other students) were strongly aware of the patient's discomfort. This set a pattern for Val of paying particular attention to the situations in which patients found themselves.

Val also mentioned that he felt uncomfortable interviewing patients during the first year of school, since he was not entirely sure what the technique of interviewing was. Lee said that he learned a lot about interviewing by taking two courses at the MGH. Through these courses, he realized that ordinary actions, such as nodding and careful listening, were a very important component of interviewing.

Allan asked whether we thought that interviewing was a skill which could be taught during the first year of medical school. He noted that interviewing was the most basic information gathering device in Medicine, and that it laid the groundwork for all other information. Lee thought that social science would enhance the teaching of interviewing. It would allow students to understand how their actions influenced others, and how different types of "power" are expressed. After teaching interviewing, the Medical school could add on clinical skills.

Alan G. related that in his section of the Psychiatry 700A--"Behavioral Science in Medicine"--course, he conducted several interviewing sessions. Half of the students hated this, and half loved it...there was no middle ground. They spent several sessions talking about interviews, and how to raise uncomfortable issues. This approach might be formalized and introduced into a standard first year curriculum.

Lee talked about several ways that the social sciences could be integrated into this teaching. They could introduce information about how the environment affects patients, and about the loss of control which is experienced in a hospital. In addition, social scientists could talk about the socialization of physicians.

Allan said that he thought there was a danger in introducing the issues of socialization to first year medical students. Since first year students might not have faced many issues in medicine, the teaching could conceivably undermine confidence before any confidence developed.

Jeff thought that at least an introduction to interviewing could be taught. This would allow students additional time to perfect their interviewing skills. Allan wondered if Psychiatry 700A, a course in the first year curriculum, should teach the theory of interviewing, and whether Psychiatry 700B, a second year course, should allow students to interview real patients. If there were skilled instructors, this might be very successful.

Bob remembered that at an earlier meeting Shelly had read to the seminar excerpts from a diary which she had kept during the first year of school. Shelly noted that she felt that she had changed during the course of the year, and that she began to identify more and more with the medical team, and less and less with the patients. Bob thought that this would be a valid subject for social scientists to teach.

Lee recalled that his first experiences with interviewing changed his perspective on basic science, and of medical tests.

Val related the conversation to the development of the New Pathway, an innovative, new curriculum being devised for future HMS classes. The New Pathway would allow students to begin developing interviewing skill very early in their career, and might allow them to integrate these skills more completely during their medical school training. Jeff pointed out that while this would allow students to learn interviewing while they were still young and empathic, they would be less able to ask questions about medicine.

Bob felt that if interviewing were taught in the first year, student might prefer to be taught by physicians, and not by social scientists with PhDs. He thought that students might make a big distinction between MDs and PhDs, and that this would make it more difficult for the social scientists to teach effectively.

Lee suggested it would be possible to find social scientists whose perspective allowed them to work and teach as critical allies, and not ideological opponents, of physicians. Allan said that this certainly might be the case, but that often sociologists saw themselves as reformers.

Bob redirected the conversation by talking about a Psychiatrist who tried to categorize patient's needs and desires. This categorization led to a re-definition of the doctor-patient role. It allowed doctors to understand the discordance between the needs of patients and the system's ability to provide for these needs.

Val added that this technique seemed to allow the doctors to understand the hidden agenda the patients were bringing to the interaction. It seemed to be important for both doctors and patients to work with the same data base, in order for them to communicate clearly.

Alan thought that it was important to involve skilled clinicians in the teaching process more. He wondered how this could be done.

Allan said that the first year tutorials provided a good opportunity to do this, but he wondered if this opportunity was being fully realized.

Jeff said that the tutorials highlighted his frustrations during the first year of school. He wondered why we were not given the opportunity to develop basic science skills and clinical skills in parallel. Even in ICM, it seemed as though administrators wished to completely separate the interviewing (taught by Psychiatrists) and the teaching of the physical examination. Lee said that some of the interviewing courses available through the Primary Care division at the MGH helped him develop his skills.

Bob was amazed that, when he originally came to Boston, it seemed as though Family Practice was disparaged. This was especially surprising since many of the Family Practice programs Bob had experience with had a very sophisticated approach to interviewing. These programs integrated extensive teaching of interviewing throughout the entire residency program, and this emphasis percolated back through the medical schools. Why was there nothing like this in Boston?

Jeff summarized the consensus of the group that there is a need for this type of teaching. But how useful can social science be? Can it describe bedside manner? If the essence can be captured, can the description affect our behavior? Lee thought that much could be described, but there would always be some intangibles which would be left out. But why are we so sure that so little of art can be taught?

To the extent that social psychology can expand our vocabulary, it could change our perceptions and our behavior. In addition, role models are very important. Lee suggested that we use case studies to teach principles of interviewing.

Bob suggested that videotapes could also be very useful. He also thought that tests could be developed to assess students understanding of these approaches.

Jeff asked whether it would be necessary to prove improved clinical effectiveness in order to have these new teaching methods accepted. Can the Art of Medicine be separated from the Art of Life? Lee thought it might at least be possible to use social science techniques to predict who will be good artisans of medicine.

Alan suggested rewarding those doctors who have excellent skills, who are charismatic, and who teach. He offered Leston Havens as an example. Bob noted that Steve Stelovich might be another example. But, he added, don't romanticize this notion, because you might convince yourself that great physicians are born and not made.

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February 20, 1985

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# PSYCHEDELIC DRUGS AND ALTERED STATES OF CONCIOUSNESS

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Chapter 23

Psychedelic Drugs and Altered States of Consciousness  
Meeting of 20 February 1985

Presenter: James Gaudet

Host: Steve Stelovich

Correspondent: Anya Hurlbert

"With me, as with every other person of whom I have heard, the keynote of the experience is the tremendously exciting sense of an intense metaphysical illumination. Truth lies open to the view in depth beneath depth of almost blinding evidence. The mind sees all the logical relations of being with an apparent subtlety and instantaneity to which its normal consciousness offers no parallel; only as sobriety returns, the feeling of insight fades, and one is left staring vacantly at a few disjointed words and phrases, as one stares at a cadaverous-looking snow-peak from which the sunset glow has just fled, or at the black cinder left by an extinguished brand."

"On Some Hegelisms," 1882

(From addendum giving account of James' self-experiments with nitrous oxide)

James Gaudet, the presenter, posed the question: Do psychedelic experiences reveal valuable and valid insights into the workings of the mind, and should research on psychedelic drugs therefore be rejuvenated? In the sixties and seventies, psychedelic drugs such as LSD were not only espoused by radical figures like Timothy Leary who claimed that LSD opened up spiritual worlds to anyone who used it, but also used in a wide range of medical and scientific contexts, including therapy for terminally ill patients (re: the selected reading, "The Human Encounter with Death," by Grof and Halifax), and neuropharmacological research. Yet a heated and often irrational controversy raged over LSD's true effects, from which it seemed no objective account could emerge.

Now, in the mid-eighties, scientific researchers and street users both have lost interest in LSD and other hallucinogens. Why? Did the disparate groups which used the drug simultaneously and independently conclude that the drugs' beneficial effects were outweighed by dangerous side-effects? What can we learn about the mind of the society we live in by dissecting its *choice* of drug? asked Alan Green. He cited the example of methadrine use, which dropped precipitously in the mid-sixties following adverse publicity encapsulated by the ubiquitous slogan, "Speed Kills." On the other hand, the number of opioid users per capita has remained remarkably constant since 1890, although the class of user has shifted from one end of the socioeconomic scale to the other.

Perhaps psychedelics, like speed and unlike heroin, fell from favor because they frightened users. Alan recalled the harrowing example of the effects of chronic LSD use in the vacuity and confusion of the ex-user's mind – an example that presented itself regularly to a young medical student or resident on the psychiatric ward a decade or two ago. Confirming his impression that LSD "scrambles the brain," a recent study reported measurable physiological and neuroanatomical changes in the class of ex-users who have flashbacks.

But in the 1960s, to use drugs was to make a political statement, argued Bob Goisman, and the battle over its use boiled down in part to a battle between radical and conserva-

tive political ideas. Now the times have changed and the conservative in power and the recreational drug user have merged into one: witness the yuppie stock-broker who snorts cocaine to keep her mood up during a bear market. The equivalent character in the sixties, an acidhead who voted for Agnew, could never have existed.

Steve Stelovich emphasized that the quality of the drug experience certainly determines who uses it and when. Cocaine, a popular drug of today, intensifies mainstream experiences, enhances work performance, and brings people together, whereas psychedelic drugs withdraw the user into an intensely solitary experience.

Jeff Saver wondered if the quality of the psychedelic experience itself changes if the culture that guides its interpretation disappears or evolves. Steve immediately recounted the true story of the Canadian citizen who unwittingly participated in an experiment run by the CIA – the Canadian was given a dose of LSD without his knowledge and was so unhinged by the psychedelic experience that he killed himself. Contrast that reaction with Joan's (a patient described in the Grof and Halifax reading) – she took LSD in a therapeutic setting and attained a peacefulness and sense of oneness with the world that reconciled her to her terminal illness – or with the Native American Church ritualists' (described in the second reading) – they are inspired by a night of peyote-eating to ardent devotion to God, brotherliness, and abstinence from alcohol.

Why are responses to psychedelic drugs so dramatically variable and how may they be controlled? Does the answer lie in the size of the dose, the influence of the user's expectations, or the user's genes?

These questions are particularly salient in considering psychotic reactions to psychedelic drugs. Bob quoted a statement in the Grinspoon and Bakalar reading: "People given a psychedelic drug without their knowledge are more likely to show a classic psychotic reaction." But prior knowledge cannot be the only factor, as Alan emphasized by describing a study which correlated bad reactions to LSD with personality types, concluding, for example, that the panic attack tends to occur in "uptight" individuals (implying that our "yuppie friends" who coke it up would probably "freak out" on LSD.)

Psychedelics are not the only drugs that can induce craziness. Steve recounted the history of his "very crazy" patient who declared that he had been sane until the first time he smoked pot, when he just "went crazy." Worse, the pot may have precipitated his insanity, but nothing could cure it, even giving up pot. Alan reported one study suggests that 25 percent of the PCP users who experience acute drug-induced psychosis go on to develop a chronic psychosis, and posed the relevant question: Are these people biologically destined to become psychotic anyway?

Is it possible, continued Alan, that just as there is a type of person for whom pot or PCP is too crazy, too dangerous, there is a type of person for whom LSD is crazy, but who is also nearly psychotic to begin with and continues to take the drug because it enhances this state – because, for him, the LSD experience is "ego- syntonic."

What about the beneficial effects of psychedelic drugs? They certainly exist, but can they be accessed only by undergoing the horrors of the accompanying psychedelic experience? asked Jeff. Perhaps they can, in an intense, compressed session of psychotherapy, answered Alan.

James agreed, referring to the similarity between Grof's description of the psychedelic experience as a way to peel back the deepest layers of "condensed experience memories" and the psychoanalytic probing of the unconscious. Indeed, both experiences may be forms of regression, even rebirth – but one is controlled, and the other is not. (Yet even in psychoanalysis, the experience can get out of control; some patients, improperly selected, may regress too much in analysis, commented Alan.)

Bob suggested that there is a continuum of experiences at the center of which is the psychedelic drug experience, and at opposite ends psychotherapy and endogenous psychosis. Like the psychedelic experience, the psychotic state can evoke intensely positive feelings. Bob illustrated this point with the story of a jazz musician who during a protracted psychotic experience hallucinated a jam session between John Coltrane and Bob Dylan, which was filled with the most beautiful music he had ever heard. He could only regret that he had to go through such a terrifying experience to get such invaluable musical insight.

*Any* profound experience that changes you, exclaimed Steve, must be both exhilarating and frightening!

Jeff wondered how far the similarity between psychotherapeutic and psychedelic experiences might extend. In particular, how often do mystical experiences, so central to the LSD experience, occur in psychotherapy? Alan answered, "rarely!" But Steve qualified Alan's response by admitting that often a patient walks out of a session saying, "I came in expecting X Y and Z and I walked out a different person" – in the sense that the patient is "mystified" by what he has found in himself, he has approached a mystical revelation.

Turning the discussion around, the group wondered whether mystical experiences were intrinsically psychotic. Or, more mildly, Jeff asked, does the ease with which anyone may simply drop a tab and have a mystical experience call into question the authenticity of the visions claimed to invest religious leaders with their authority?

Bob described a patient with manic psychosis who had trained to become a cleric. Although the mania appeared to grow as an acceleration of normal religious feelings, once the manic episode had passed the patient had no difficulty differentiating it from normal religious euphoria. The patient even developed an internal system which notified him when he was about to tip into mania: when ordinary objects transmitted messages to him from heaven, for example. But had he been socialized into believing (by his experiences as a psychiatric patient) that craziness was one thing, and religion another, and "never the twain shall meet?"

Indeed, said Dan Barboriak, even in organized religions which encourage mysticism, such as Catholicism, there are prescribed limits, and if a believer goes too far, he suffers dire consequences. Yes, agreed Jeff, visionaries who deviate from doctrine are persecuted for their abnormality, even if, as Saint Joan of Arc was, they are vindicated 400 years later. Looking at it another way, said Steve, it's remarkable that some historic figures who today would have been thrown into a hospital managed to pull prophetic wisdom out of their psychotic hallucinations!

Perhaps, suggested Alan, much of the opposition to the use of psychedelic drugs is not based on worry over its pathological effects but instead on the fear that psychedelic experiences will usurp the authority of "legitimate" religious or psychotherapeutic experiences.

Do the ease and frequency with which psychedelic drugs induce a mystical experience have other, biological implications: a fixed neurochemical pathway, for example? How is it that a single chemical can cause the same mental experiences in so many functionally different brains? Anya Hurlbert wondered. Like dream experiences, are some LSD experiences "hard-wired?" Do the two sets of experiences perhaps even arise from the same neuronal circuit? The psychedelic experience certainly has been compared many times to a dream – but oddly enough, said Steve, a person on LSD generally doesn't sleep. That may be because conventional user's wisdom says that it's dangerous to fall asleep during a trip – the hallucinations get out of control, said Bob.

Perhaps the serotonergic system underlies both dreams and the psychedelic experience, but, said Alan, probably the more useful way to look at the latter is as a model for mania. LSD is chemically related to serotonin, and depression is thought to have a hypo-serotonergic basis. Phenomenologically, Joan (of the Grof and Halifax paper), whose mother had suffered from a major affective illness, appeared to swing from depression before to hypomania after her first session with LSD, Steve pointed out.

Given the possible importance of psychedelic drugs in modeling and treating psychoses, and accepting the validity of its inspirational and therapeutic effects, should scientists advocate the return of experimentation with the drugs? In addressing this final question, the group expressed opinions and beliefs close to the heart, and the discussion accelerated to an animated and emotional conclusion.

Jeff offered an initial response: The nervous system is so complex and so difficult to understand, it might be prudent not to discard *any* method of exploration – while, of course, attempting to eliminate possible dangers of the method. Furthermore, Jeff said, it would be essential to separate the scientific investigations from ideology – we don't want another Timothy Leary.

"But this is precisely the problem with such a powerful drug," exclaimed Steve. "You can't expect a subject to walk away from a psychedelic session and forget the profound changes it induced in him just because he is five bucks richer for it."

That question is moot anyway, pronounced Alan: there probably isn't a Human Studies Committee in the country that would approve psychedelic experimentation in humans. Of course, acknowledged Steve, like hypnosis in nineteenth-century France, the powerful unexplainable effects of psychedelic drugs are considered subversive.

"And these are not times which tolerate subversive movements!" interjected Bob. "My own fear is that the debate over experiments involving human subjects will stop being a scientific question and instead become a political one." If the legislators see a scientific method as a threat to the government's security, no scientific argument could persuade them to allow its use.

Yes, Dan allowed, perhaps Human Studies Committees are too strict, but nevertheless, under no circumstances should studies be allowed which can cause permanent changes (whose value anyone could question) in human subjects.

Alan suggested that although it is a very serious question whether psychedelic drugs should be used in therapeutic trials in humans, one that could be debated, there should be no barrier to using the drugs in animal experimentation. Yet there seems to be.

"But," argued Steve, "should we not only ask what we can learn about the pharmacology of the nervous system, but also what we can learn about the meaning of life? None of us are always happy with what sanity has brought! Who knows – maybe psychedelics are just the thing to treat the human condition!"

James offered a similar sentiment: echoing Grinspoon's message, he said that we may ~~have~~ let something valuable slip away by curtailing exploration of psychedelic experiences before we could say what they really were or how they may benefit us.

Jeff wryly quoted Robert Nozick, who said that he became a philosopher rather than a physician because medicine didn't allow growth of ideas or expansion of one's potential. Steve mused, "Has medical training made us lose touch with the art of medicine? The very thing that psychodynamic therapy could offer in conjunction with organic treatments seems to have been lost! Is it because medicine attracts a certain type of person – the obsessed, repressed type, who has to be in control, and isn't open to new ideas – the opposite of an artist?"

Bob admonished, "Don't take your categorization too far! Art and science do mix, even in medicine – especially on the frontiers of research."

"But these experiments," exclaimed Anya, referring, for example, to Grof's LSD therapy, "are neither scientific nor creative. If you're going to do scientific experimentation, do it right! Don't just give someone a pill and ask him how he feels – cosmologically." Instead, Anya suggested, try probing time perception, visual perception, or even recording eye movements (as has recently been done in schizophrenics, revealing significant abnormalities). If such experiments are too boring, then the problem lies in the imprecision of more interesting experiments, not in the precision of science. Alan said that scientists probably

do not see the value of psychedelic experiments in humans precisely because they do not see what questions could be answered by them.

"But," Steve said, "We have boxed ourselves into such small categories that we can't even ask the right questions anymore! Who is going to ask anything about the meaning of life? Medicine must acknowledge that although giving LSD to terminally ill patients may not be good science, the resulting experience raises some questions which medicine cannot ignore."

Who can a person turn to, to ask deep, human questions about life and death? Steve asked. Must the physician replace the wise man, the prophet, the priest of older times and make himself responsible to those who ask such questions? But, the group concluded, if the only route to expanding medicine's responsibility to humanity is by asking precise scientific questions, performing controlled experiments in animals and slowly working up to clinical trials, how can we ever get to the larger questions of life?

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March 20, 1985

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# ARTIFICIAL INTELLIGENCE AND THE MIND

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**Chapter 24**  
**Artificial Intelligence and the Mind**  
**Meeting of 20 March 1985**

**Presenter:** Anya Hurlbert  
**Host:** James Gaudet  
**Correspondent:** Jeffrey Saver

"Alter the pre-existing conditions, and with inorganic materials you bring forth each time a different apparent end. But with intelligent agents, altering the conditions changes the activity displayed, but not the end reached; for here the idea of the yet unrealized end co-operates with the conditions to determine what the activities shall be.

The pursuance of future ends and the choice of means for their attainment are thus the mark and criterion of the presence of mentality in a phenomenon. We all use this test to discriminate between an intelligent and a mechanical performance."

The Principles of Psychology, 1890

Philosopher of mind and machine Daniel Dennett has divided all approaches to the study of mind into two basic camps. The "bottom-up" researcher believes that the one true path to the understanding of brain function lies through a painstaking, detailed elucidation of the physical structure and function of individual neural elements and small cell assemblies. Basic neuroscientists generally fall within this category; studies of neurotransmitter receptor conformations, recordings from single cells in invertebrates, pharmacologic attempts to alter action potential morphologies, etc. are their lot. The "top-down" researcher holds that the one, true path to understanding brain function is rather to be found in theorizing about the component psychological processes necessary for the brain to do what it is known to do and constructing models that suggest and test how these functions may interact. Artificial intelligence researchers (and their philosophical fellow travelers) will usually be found in this category; designing and programming expert systems based on accounts of professional thought processes, writing compilers to translate between natural language and machine language, creating an even better chess-playing computer program, etc. is their bread and butter. Dennett concludes that the "top-down" approach will in the end prove the most important and fruitful, though, of course, both are needed. Only such an attempt to understand how the brain works functionally, rather than physically, can provide us with an improved conceptual explanation of brain activity. Ultimately it is, to use the familiar terms of the AI lexicon, the software, not the hardware, of the brain in which we are interested.

It is most unfortunate, however, that Dennett overlooks, or at least does not give equal emphasis to, a second tradition of "top-down" study--clinical medicine. From within the biomedical framework, psychiatrists, neurologists, and, to a lesser degree, all physicians have confronted, treated, and theorized about human brain-activity in its full phenomenologic scope and richness for many centuries. They too--biological psychiatrists, neurologic localizationists and psychodynamic psychotherapists alike--have promulgated models of elementary psychological processes and their interactions, with the noteworthy advantage of having daily opportunities to

examine instances of both normal and abnormal human brain function. Lamentably, the two "top-down" traditions have rarely exchanged insights and perspectives. In its small way, this meeting of the William James Seminar, Assembly '82 was intended to redress this disciplinary isolation and encourage much-needed attempts to synthesize and integrate the perspectives of both the AI and the NI (natural intelligence) traditions.

The first reading for the meeting, "Why People Think Computers Can't" by Marvin Minsky, was a good-natured overview of the reasons artificial intelligence researchers believe the essential features of the mind may be modeled in a machine. The second two readings, "Artificial Paranoia" and "Ten Criticisms of Parry", described a computer simulation model of paranoia. Designed by Kenneth Colby in 1971, and not without a certain notoriety, Parry is "an actual but non-human case of paranoia...constructed in the form of a computer model. The model's input-output behavior, in the communicative situation of a diagnostic psychiatric interview, is identifiable by psychiatric judges as 'paranoid.'"

Anya Hurlbert, the session's moderator, began the meeting by relating two oft-made observations about the field of artificial intelligence; together they encompass AI researchers' deepest anxieties, and their greatest hopes. First, Anya noted, the project of AI consists in "trying to model something about which we know nothing." (This is a common joke told about AI.) But, Anya continued, it may turn out that "the questions AI asks about thinking machines will turn out to really be questions about own minds." (This would be AI's last laugh.)

Anya then introduced seminar members to a leading controversy among those who take AI seriously by reviewing the arguments J. Searle has advanced against the optimistic position Marvin Minsky staked out in the distributed reading. Searle, she noted, takes issue with Minsky's view that computers may be constructed with "robust networks of knowledge" that allow associative reasoning. Machines can only manipulate symbols (have syntax), claims Searle, they cannot generate or recognize meaning (have semantics). Shuffling the symbols of the Chinese alphabet according to prescribed rules, for example, is not equivalent to understanding Chinese.

Observing that "AI rejects the idea that the mind is a natural biological phenomenon" for the view that it is "a formal set of operations", Anya offered a bevy of questions that members might address. What are the hardest tasks our minds do? Do we have insights into how our minds work that could help in the design of AI programs? Are we ourselves

input-output systems? How would the world change if computers could think? Could computers replace doctors?

In response, two doctors first discussed Parry, the computer that had replaced a patient. Both Steve Stelovich and Bob Goisman said they had been impressed with Parry as a model of paranoia. Transcripts of the the program's interaction with different interlocutors, Bob said, "were evocative of how a paranoid person must feel." Steve then described two cases he has seen involving extraordinarily paranoid patients.

Bob commented upon the contrast between Parry, which is an input-output device but whose programming incorporates a simple theory of paranoid mental processes, and behaviorism with its emphasis on stimulus and response and studied neglect of internal process. Shelly Greenfield observed that paying undue attention solely to symptoms came at the expense of gaining more knowledge concerning the precise biopsychosocial etiology of the patient's illness. It is the etiology we may ultimately want to treat, she added.

Steve then raised the issue of consciousness, "or, for lack of a better word, soul." What phenomenological experience could a computer generate? Yes, agreed Shelly, the models are fascinating, but are they really equivalent to our thinking processes, both objectively and subjectively? Jeffrey Saver observed that AI theorists often rely on "associative networks" and "self-monitoring" programs to make such a claim plausible.

Steve pointed out that the paranoid persona was perhaps too easily modeled to constitute a real test of the capacities of AI. Paranooids do have simple goals, generally only one or two overriding issues. But what about more complicated illnesses or personalities. Jeff wondered if successful attempts to model more full-fledged human characters would come at the expense of the immediately graspable theoretical framework resting on particular hypotheses about paranooids seen in Parry. When computers are used to model complicated phenomena, like the weather or economies, he noted, huge numbers of equations and rules are programmed together, taxing human understanding as much as the natural phenomena themselves. The computer simulations become virtual reproductions in an internal representational space of the complexity of the outside world. They do offer accurate predictions, but they succeed because they so closely approximate the messiness of external reality, rather than because they give insight into underlying regularities.

Bob then drew the group's attention to the capacity for "flares"--transient outbursts occurring after a succession of anxiety-provoking questions--programmed into Parry. He

thought this was an ingenious touch that enabled the program to mimic extraordinarily well the roller-coaster ride of conversations with paranoid patients. Steve added he thought the program would make a wonderful teaching device for instructing novices psychiatrists and other caretakers in what to expect, and for passing along a few simple strategies to consider employing, in encounters with paranoid patients.

Jeff was reminded of Sherry Tuckle's recent claim that models of mind generated from computing and AI are replacing popular notions of Freudian and other psychodynamic theories in our everyday, "commonsense" thinking.

Anya then headed the meeting towards conclusion by suggesting that the influence of computer/cognitive models on our habitual ways of explaining our behavior would might become even more pronounced, for AI's models of mental functioning were likely only to become more sophisticated and powerful.

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April 24, 1985

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# THE MEANING OF ILLNESS

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Chapter 25  
The Meaning of Illness  
Meeting of 24 April 1985

Presenter: Alan Green  
Host: Alan Green  
Correspondent: Jennifer Haas

"Time is long. One human life is an instant. Is our patience so short-winded, our curiosity so dead or our grit so loose, that one instant snatched out of an endless age should not be cheerfully sat out. . . . The inevitable release is sure; wherefore take our turn kindly whatever it contain. Ascend to some sort of partnership with fate, and since tragedy is at the heart of us, go to meet it, work it in to our ends, instead of dodging it all our days, and being run down by it at last."

Diary Entry, 1870

**Readings:**

- (1) Soma Weiss' account of a medical student's case of subacute bacterial endocarditis; the student recorded his fatal illness for prosperity with obsessive care, and this task clearly served a crucial adaptive function for him.
- (2) Dr. Robert Mack's response to his diagnosis of lung cancer. His approach, as a surgeon, was to "cut it out and get on with things." Yet, when this failed he realized that he needed to change his approach to life.
- (3) Ivan Black's "Essays of a Medical Life," by Alan Green, which describes the difficulty doctors have when they become ill.

Alan Green opened the seminar with a personal account of his long viral illness, which began while he was a resident. He went through several phases of response. First, a phase of fascination, in which he noted that he was having difficulty walking upstairs. Then there began a prolonged period of denial, in which Alan tried to compensate for the weakness, yet somehow could not believe there was anything wrong with him. His brother, a physician, had to point out that he had lost weight and was sleeping constantly before Alan admitted he might be sick. He went to see a doctor who was a friend -- perhaps a way of controlling things. He was then hospitalized in the same hospital in which he had been an intern; that brought up inevitable conflicts as to whether he were really a patient or not. And he tried to act as if he weren't. But seeing the medical people from the other side of the bed was jarring.

After the hospitalization, Alan remained very weak and had to rest. The prognosis was for a slow recovery. He kept wanting to return to work, only to find he didn't have the strength. But the continued inability to believe he couldn't do things perplexed him. It was only after two years of illness that he reached a state of acceptance of his dilemma. But once Alan had convinced himself that there was nothing he could do to change his condition, he felt better. This gave him a tremendous sense of psychological freedom. He began to write in bed, kept journals and eventually began a novel. As years more passed, he slowly regained his strength with the disappearance of the virus.

How to return to a normal life was something Alan then had to face. He had been removed from the world, but as he recovered he decided to finish his residency. He did it slowly, carefully, often dreading the return of symptoms -- which fortunately never came.

The fact that Alan was a doctor who got sick was one aspect of the discussion that followed. If knowledge is power, then all-knowing physicians should never fall ill. Alan wonders if this paradox is a problem for many doctors with illness. Learning to become an invalid, to allow oneself to accept the illness, seems required for recovery; yet that may be most difficult for doctors.

Although the meeting centered on Alan's account of his illness, several interesting questions were raised. Jeff Saver pointed out that for some this experience might have taken on religious or mystical qualities as it had in the life of William James.

Alan's eloquent discussion was very moving to all present.

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May 22, 1985

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# PSYCHE AND HEALING II: CLINICAL INSIGHTS

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**Chapter 26**  
**Psyche and Healing II: Clinical Insights**  
**Meeting of 22 May 1985**

**Presenter:** Chris Austin  
**Host:** Alan Green  
**Correspondent:** Shelly Greenfield

"Of all the new agencies that our day has seen, there is but one that tends steadily to assume a more and more commanding importance, and that is the agency of the patient's mind itself. Whoever can produce effects there holds the key of the situation in a number of morbid conditions of which we do not yet know the extent. . . . And whatever one may think of the narrowness of the mind-curers, their logical position is impregnable. They are proving by the most brilliant new results that the therapeutic relation may be what we can at present describe only as a relation of one person to another person."

Letter published in *The Boston Transcript*, 1894,  
opposing proposal to license practitioners of  
medicine

Participants: Liz Mort, Linda Leum, Sarah Feldman, Chris Austin, Shelly Greenfield, Paul Unger, Jeff Saver, Alan Green, Allan Hobson

Readings: 1. "On Warts" by Lewis Thomas, from The Medusa and the Snail (New York: Viking Press), 1979.

2. "Which Doctor is Not a Witch Doctor?" by Jeffrey Saver and Steven Denlinger, from Advances 2:1, 20-30, 1985.

3. "Psyche and Skin" by Richard Masters, from Pathophysiology of Dermatologic Diseases, Soter and Baden, eds. (New York: McGraw-Hill), 1984.

CA: We had our first meeting on Psyche and Healing and Mind-Body Dualism one year ago, in September, 1983. We spoke of Norman Cousins' ideas of the power of the spoken word and that the "patient should be captain of his own health team." We discussed how this is not often the case and how the inadequacy of current medical practice in this regard contrasted with, and was linked to, its success in applying new medical technologies. Allan Hobson said in the "Which Doctor is Not a Witch Doctor?" reading that "the task for you is to keep your mind open while you classify and analyze." I found that in the beginning of the clinical clerkships I tended to treat patients analytically and coldly at first and then eventually more naturally. I wonder how has the third year affected all of us and what our opinions are now on the mind-body issue and the psyche and healing. One of the purposes of this meeting is to take stock of what we are doing now. Does "supratentorial" mean "non-existent?" The readings deal with different aspects of this issue. In Warts, Lewis Thomas wonders about the overall mechanism of this. The author of Psyche and Skin, Richard Masters, was trained in philosophy in college. He notes that there is metaphysical, psychoanalytic language which seems to describe a separate realm of phenomena and comments on the lack of a bridge between mind and body in existing language. He also says that skin is an important perceptual organ. He comments that people in depression have a chronic itching state which stimulates self-soothing of the endocrine system.

A recent article in the New England Journal of Medicine, "Healing by the Fundamentals," comments that the Greeks had three kinds of doctors: knife, herbal, and word doctors. The Greeks looked on all three as equivalents but today's "word doctors" are considered cheap and worthless with words left behind in an effort to master chemistry.

Also, I'd like to summarize for the group a recent conversation I had with

Dr. David Eisenberg at the Beth Israel Hospital in which he described to me some of the experiences he recorded in his new book, Encounters with Qi. Eisenberg participated in the first American medical student exchange with China. He says that Qi in Chinese means that which differentiates life from death, inanimate from animate. Pathology is in the balance of energy. Qi equals vital energy and a patient can mobilize this inner force and focus enough energy to heal himself. The idea of "unity" is fundamental to China. The purpose of acupressure and acumassage is to rebalance Qi in the body. There are five elements and if an organ has pathology, then there is something wrong with the balance of these elements. The problem comes when they talk about external Qi which is directed outwards. There are people that can make other people feel that another person's arm is electrified. Their opinion is that this can be used as a healing force. What we speak of as the "laying on of hands" they actually take seriously.

So the questions are number one, are we missing something big? Number two are we really talking about the laying on of hands as a healing force? What is it? Is it the mobilization of the neuroendocrine system or is it the placebo effect? How can you apply this to patients? Should we be using psychiatric techniques actively, utilizing possible concurrent neuroendocrine effects?

FU: You know, you don't have to go to China to find these things. A friend of mine's mother does polarity massage.

CA: But the difference is a huge philosophical underpinning to what is done. What do you make of these techniques?

FU: It works.

JS: I wouldn't say that we're missing something. Rather, the question is by what mechanism does it work and how can we use it? How do you gain a foothold in applying the details?

AH: That's what I'd be interested in knowing. Do you get any training in this? What has your experience been? Who teaches you to utilize suggestion effectively?

LM: I guess I would first have to decide what those techniques are. Are they talking, listening? You don't learn these in internal medicine. You learn them informally.

JS: What we learn is the opposite. Not only in our clinical experience are we not exposed to a systematic way of trying to apply these attitudinal interventions but we are taught generally to utterly neglect psychological well-being.

AH: How have you dealt with this?

JS: It has been difficult. You hunger for role models. You

try to understand the forces that make the system the way it is.

CA: When I was talking to David Eisenberg, his thoughts had been that it is not so much opposition to the idea of integration of mind-body, but that we are trained in reductionism. The hostility may be not because of disagreement but because of a lack of understanding. It may be just because of the way the brains of the people who go into medicine are put together or because of the training, they are incapable of viewing these interactions in the way that perhaps we would.

AG: To some degree, however, this is natural. People avoid confusion. When you are a student who tries to understand, you try to make yourself feel better in the face of uncertainty. Otherwise it is threatening. It is difficult to realize that the tools we have are imperfect and that some have hurt people more than they have helped.

LL: I'm not sure you can talk about this in terms of training. It is nothing you necessarily learn in medical school. Some people are intrinsically connected and others are not. Even if you are oriented this way, it gets difficult. I am doing medicine now, and I feel as though we are torturing terminal cancer patients until their families say please stop. I know we have to encourage every last hope, but I think a terminal situation must be recognized. If you don't have hope, life is more difficult.

CA: But while you can't give false hope, there still must be a reason to go on.

SG: The first three weeks that I was on the wards, I had a wonderful junior resident and one thing that he did that I thought was excellent was that he took care of the things he had to do for the patients, but then when the patients told him other things, he would really listen to them and then say, "I understand." He had no other answers for them, but he was telling them, I understand. We had to move through an entire ward so quickly, but his ability to do that was very special. He obviously connected with the patients and was very concerned about them and in the reality of the ward situation, this was a simple thing he did that made a big difference. The patients knew that whatever they had said was understood by somebody and not just disregarded. Sometimes you do feel overwhelmed and powerless because you only have three minutes with these people who have so much pain, but there is something you can do. If you admit the fact that you are not omnipotent, you are not going to heal all these people, but these are people who are in trouble. But this seems to be the essence of being a doctor, to connect with these patients

at the bedside in such a way that they know they have been heard.

It ~~seems~~ that the training process is set up around efficiency and a lot of things that don't leave room for what is human and psychological about people. The training is abusive and the interns and residents are just people with their own lives who work 120 hours per week with no sleep and they are angry. This anger has to come out somewhere and unfortunately it comes out at patients, other housestaff, medical students.

SF: I wanted to comment on making a patient feel that you care about them and how that can affect them. I had this patient in medicine who was in his 40's and had AIDS. I would go in and listen to his lungs on his first admission and I was the only person on the team to do this. He came back to the hospital encephalopathic, and he didn't know anyone's name except mine. This is very powerful. One of the things that very much disturbed me about this guy's care is that nobody ever touched him except me. When he died and he was completely encephalopathic, he asked for me and that is because I was the only one who ever touched him. The touching was such an issue for our team. When he coded in a very terrible way, the residents weren't even upset about it. And I realized that I had taken the total emotional noise of the team. The housestaff had completely distanced themselves. The team assigned me to several young cancer patients who died and left their care to me. No one else went to see these people except me and I realized that they had avoided the emotional issue for themselves. I had taken the total emotional rap for the team.

LM: You learn these techniques. You are both giving us examples of how you can learn these things in this system.

SF: But the role models I had did not teach me this. Their answer was to give the medical student charge of these emotionally difficult patients.

LM: I was told when I did medicine, that as a medical student I had the time to sit and talk with the patients and I did this. I would find that at the end of the day at rounds I would bring up the psychosocial issues and then usually the answer would be "Call a psych consult."

SF: Calling a psych consult is not like saying that the supratentorial doesn't mean anything is wrong. The residents know something is wrong, but they can't or won't be the ones to deal with it.

SG: Usually, the medical staff feels that their

job is to deal with the medical problems: follow the Na, K. They think we can smile and say hi but if there are any other problems, call a psych consult. And then they denigrate the psychiatrists because they don't come in with all these weapons of war; they don't come in there with the methotrexate and all these other substances to zap all the bad cells. It is just like the NEJM article Chris presented at the beginning. Words are denigrated in our society. Probing the mind with words is not considered something as wonderful as probing the body with a knife and that that's a technique that takes years to develop especially to do it well, just as being a thoracic surgeon requires techniques that take years to develop. It is really amazing because these people are throwing up their hands all over the place and on the wards at least 50% of the problems are psychosocial, and probably much more than that. And the medical residents and interns throw their hands up and at the same time denigrate the professionals called in to deal with the problem.

CA: Does the psych consult work?

AG: The psych consult's purpose seems to be as a lightning rod. Call the psychiatrist. Get it off our backs.

CA: Does that work?

AG: Well it works for the resident.

CA: But does it work for the patient?

AG: The purpose of the consult is to give advice. If there is a complicated hematological problem, you try to figure it out yourself and then you call a consult and they advise. All too often if you call a psych consult, it ends there.

CA: What is wrong with two doctors?

LL: But the patient does not split himself into mind and body.

AG: You can't separate the mind and body.

SG: In your example of the hematology consult, what the consult would do would be to give advice and then it would be decided if it is appropriate for the residents and interns to do or if it is something that requires a specialist. Whereas the psychiatry consult doesn't come in and say this is what is needed and these are the kinds of things that the housestaff can handle. They don't say this is the kind of technique you can use with a patient with this particular problem. Try it for a week and see if it helps.

LM: I disagree. We had a great patient in medicine who had temporal lobe epilepsy and atypical angina and was in for a coronary artery bypass. In her mind, her private psychiatrist and the psychiatrists on the ward were her doctors and all we on the medical staff were doing was running around rushing drugs. Her doctors were her psychiatrists.

A psych consult was called and it was just that. He was very very good. She was very depressed and the consult told the house staff ways to deal with her. He recommended that the housestaff let her express her anger. So we would go in and allow her to express her anger. People really tried. We tried to do what the psych consult said.

AH: Did anyone besides you do it?

SG: Well, that's rare.

SF: That's a very special case. The analogy between the hematology and psych consult doesn't totally fit because the diagnosis and the assessment in psychiatry takes a long time. The hematologist can look at all the labs and may not even have to look at the patient.

AH: This patient was in for a CABG. Take a CABG to the cabbage patch.

CA: Would it make a difference if it was the psych consult who addressed the issues or if it were the medical internist.

LM: Do I think it makes any difference? Well in her case she talked to her psychiatrist. Sure it makes a difference.

AH: Well in this case the patient identified her private psychiatrist as her doctor because he had been following her for long term illness. So this may not be the best case to answer your question.

JS: The patient may be indoctrinated into the medical viewpoint and consider the internist the authority and then the internist doesn't want to deal with the emotional problems and says I'm bringing in someone else. The message communicated may be that this is unimportant and therefore I'm not going to deal with it. The emotional aspects are denigrated.

CA: What does it do to the patient?

PU: I think it is variable. I know patients who have good relations with their personal physicians and won't see a psychiatrist because the bottom line of being referred to a psychiatrist is, the doctor says you're crazy.

AH: Chris, you've been very patient with us but I'm not sure you got where you wanted.

CA: No. What I'm thinking is that calling the psych consult is persisting in the mind-body conflict. As far as the patient is concerned, he thinks that the psych problem is separate and this may make him ashamed. If the internist recognizes the emotions and integrates it may make it easier to mobilize

SF: But to play the devil's advocate, the skills the psychiatrist acquires are acquired over years: listening, sorting out. So you call a psych consult because there are certain skills they have.

AH: It is a question of knowing competence and limits.

SG: Calling in a psych specialist should be on the same model as calling in other specialists. You call them in after you have done the basic assessment and they advise on things that can be implemented. You call in special expertise when you need it. But this assumes that the medical world, the world of medicine, the world of surgery considers this a speciality among other specialties, but they don't.

AG: Why is it that there is this dichotomy?

LM: It is threatening. People are afraid of psychiatrists. Other types of physicians think psychiatrists are constantly analyzing everyone. They think they must keep them at arm's length.

SF: I had an odd insight the other day when I was doing high risk obstetrics. One patient I had was seen later by a classmate who was the psych consult. The patient couldn't believe that we were at the same level of education; she thought I was much more advanced. Clearly we are much more sophisticated in our medical training.

AH: You aren't really trained in psychiatry, yet. It's not really that we are so good at it. It's just that you haven't spent that much time at it.

PU: I'd like to raise another question. I agree that the psychological aspects of well-being and illness should be included in the work-up. There is a point when you can sign off on a medical aspect of a case. But is there a state of psyche where the patient is DNR?

AG: You can place an unreasonable burden on patients by implying that if you think the right things you'll get

better.

JS: Chris has raised some difficult questions. We have addressed the egregious deficits in medicine and neglect of the psyche. But the question Chris was asking is how can we take a step beyond this and use the connections between mind and body to help heal.

LM: To be a good psychiatrist may take years, but maybe we need more training in medical school.

AH: Alan and I were discussing yesterday the recent decision to make the Psychiatry 700B, "Behavioral Science in Psychiatry" course required for second year medical students. We had heard that someone had responded to this change by recommending that no one tell first year students to take the first year psychiatry offerings because this will further dilute the basic science experience I would have said enrich it. Not to mention that this is training for 50% of what physicians will deal with later in their practices.

AG: In many ways the psychiatry clinical rotation may not apply, or it may not be obvious how it applies to the student at that level, to what he or she will be doing in the other rotations.

AH: It seems that you aren't taught interviewing.

SG: Frequently the psychiatry rotations are experiences that shake up students. They may have spent a lot of time in medical school and maybe before avoiding certain issues and then they find themselves confronted by these things and given license to explore them. This can take up so much energy that it blocks the other kind of learning that goes on in rotations. There are ways to address these things earlier in medical school and integrate this early on.

AH: It has to be a longitudinal and integrated learning.

SG: You start with a diverse class in medical school. People will be better and worse in different things but there are certain basic skills everyone should be trained in.

CA: One of the things is that I think you do reach a time when there is a DNR and you just urge peace.

AH: That isn't withdrawal. It is more active.

JS: Is there anything about psychiatric training that better prepares you to be able to talk with a dying patient?

AG: Sure there is. It is called empathy.

AH: Recognizing defensiveness is key. When I have consulted on dying patients, many of the caretakers conspire in denial that the patient is dying and the doctors consider him a suicide risk and the patient wants to go home for the weekend but won't because he is depressed.

PU: Many people go into medicine because they are interested in biomedicine. They don't want to talk to patients. They're more interested in the BUN.

AG: It is fine until those people want to see patients.

PU: I don't think it is fine for those people to be in medical school.

SG: Perhaps someone should pop the bubble at the beginning of medical school and say that a lot of you think you are here to cure people, but actually there are very few cures. The statistics look like this: there is chronic illness and mental illness.

AH: That is the conspiracy of denial also.

PU: Perhaps in college, students should be required to know what it is all about. What kinds of things you must see and smell and do.

SG: I somewhat disagree. Part of this depends on having a context in which to place these things.

LM: I saw an acute awareness in the hospital that you couldn't cure everybody and there was this intense DNR seeking behavior.

JS: People lose touch with who the patients are on the outside of the hospital also. One patient who was in a coma came out of it and she was a wonderful woman.

CA: Considering all these questions, the psyche is not a nicety. It is an essential element. In ignoring the psyche, we are committing malpractice and that is what we get convicted for. Even if it doesn't cure all, there is something to Qi. It is not something to be taken lightly. Otherwise we are missing 50%.



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July 17, 1985

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# INSANITY AND THE LAW

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Chapter 27  
Insanity and the Law  
Meeting of 17 July 1985

Presenter: Scott Solomon  
Guest Discussant: Thomas Gutheil  
Host: Linda Leum  
Correspondent: Scott Solomon

"[In our] enlightened age, in law courts no tertium quid is recognized between insanity and sanity. If sane, a man is punished; if insane, acquitted; and it is seldom hard to find two experts who will take opposite views of his case. All the while nature is more subtle than our doctors. Just as a room is neither dark nor light absolutely . . . so a man may be sane for some purposes and insane for others, sane enough to be left at large, yet not sane enough to take care of his financial affairs. The work 'crank' . . . at the time of Guiteau's trial (Guiteau was President Garfield's assassin), fulfilled the need of a tertium quid. . . . [H]uman nature cannot be dealt with by . . . simple disjunctions."

Notes for Lowell Lectures on "Exceptional Mental States," 1896

Since the exact minutes of the meeting are unavailable, the following is a brief summary of the readings on which the meeting was based:

The first article, taken from the Harvard Medical School Mental Health Letter and written by Dr. Paul Appelbaum, discusses the present status of the insanity defense. After much public outrage over the insanity plea following the trial of John Hinckley. The call for reform of the "not guilty by reason of insanity" plea evoked mistaken ideas about the concept of the insanity defense, and the article argues that both the public and legislatures overestimate the frequency with which the defense is used. The test for insanity used by federal courts and in many states was originally drafted by the American Law Institute and there has emerged difficulty in the part of the test that ascribes "insanity" to an individual who is unable to control his own behavior. In response to public unrest with the insanity plea, a number of states have adopted the verdict of "guilty but mentally ill."

The second article, "Madness, Medicine and Justice" by Dr. Thomas Gutheil and excerpted from the Harvard Medical Alumni Bulletin, discusses in greater depth the insanity plea and, more specifically, the role of psychiatry in the legal process. The first point made in the article is that by virtue of the nature of the legal system, there will always be psychiatric disagreement in the courtroom (so long as there is a prosecution and a defense). This does not reflect, Gutheil argues, on the ambivalent state of the psychiatric community but on the system of legal arbitration. Second, Gutheil goes on the point out, insanity is a legal, not a psychiatric, term and, as such, psychiatrists are no more expert on "insanity" than anyone else. They are, however, experts on mental illness but it is a jury that has to make the final judgement of whether a particular defendant is "insane."

Dr. Gutheil continues in the article to discuss the history of the insanity defense, citing the famous

M'Naghten case of 1843 where an attempted killer of the British Prime Minister was found not guilty by reason of insanity, sparking outrage among much of the British people. The "M'Naghten test" became the first clear-cut test of insanity: "A person is not responsible if, by virtue of mental illness or mental defect, he is unable to know the nature and consequences of his action, or if he does know it, to know that it was wrong."

Dr. Gutheil continues the article by presenting a list of the areas in which he believes psychiatrists have something to offer concerning the insanity defense. First, he states that intention presupposes a sense of reality and for this reason he concludes that the psychoses, which impinge on the "sense of reality", might be legitimate reasons to consider the insanity defense. He also includes in this category dissociative states and post-traumatic stress disorders. He further argues that one must know the consequences of an action in order to be held responsible for it, and along these lines, delirium, intoxication, senile changes can all interfere with the ability to recognize consequences. The last two categories that Gutheil includes are diseases of will which might include delirium, toxic states, obsessive-compulsive neurosis, delusions of influence and "mind-body problems" including temporal lobe seizures and rage reactions which may "impinge on the mind-body connection."

Dr. Gutheil concludes the article by discussing some of the practical problems that confront the psychiatrist in dealing with the insanity defense. The first is that while psychiatrists are used to being "patientocentric", in the forensic setting they must view the larger picture and consider the viewpoints of perpetrator, witnesses, and victims alike. Second, often a considerable amount of time passes between the time of a crime and a trial, making memory of the exact events difficult. This is very important in cases where change of mental state may have played a role. In conclusion, Gutheil argues that the insanity defense is currently under enormous pressure from both the legal and psychiatric sides and that these issues will likely remain the subjects of considerable debate.

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September 23, 1985

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THE  
DOCTOR-PATIENT  
RELATIONSHIP  
AND  
EMOTIONAL DISTANCE

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Chapter 28

The Doctor-Patient Relationship and Emotional Distance  
Meeting of 23 September 1985

Presenter: Dan Barboriak

Host: Alan Green

Correspondent: Dan Barboriak

"Now the blindness in human beings, of which this discourse will treat, is the blindness with which we all are afflicted in regard to the feelings of creatures and people different from ourselves."

"On a Certain Blindness in Human Beings," 1899

The readings for this meeting were two short stories titled "A Country Doctor" -- the first by I. Turgenev, and the second by F. Kafka. Turgenev's story appears in a collection of short stories titled variously Sportsman's Sketches, A Sportsman's Notebook, or Pages from a Hunter's Album, hailed by Frank O'Connor as perhaps the greatest book of short stories ever written. The narrator is a nameless young man, a wealthy hunter who on his travels through various parts of Russia describes his encounters with various land-owners and peasants. In "A Country Doctor," the narrator is ill with a fever and spends the evening chatting over tea with the local doctor. The latter relates the story of a patient of his named Alexandra, the twenty year old daughter of a local judge. The doctor is first called to her when she is unconscious with a high fever, the family frantic and in tears. The doctor finds Alexandra immediately attractive saying that he'd never "'seen such a face before ... an absolute beauty!'" Alexandra regains consciousness but her condition does not improve; the doctor stays on, and as the days pass he realizes Alexandra has fallen in love with him; then he corrects himself: "'Love' is the wrong word. One must see oneself at one's own worth, after all. She was a cultivated, intelligent, well-read girl, and I, well, I'd even forgotten my Latin, more or less completely ... I understood very well that what (she) felt towards me was not love, but affection, so to speak, regard, or what not."

His own feelings are in turmoil ... he feels Alexandra's illness is defeating him; all his self-confidence vanishes; he realizes his own helplessness in the face of the family's blind confidence in him. He reassures the family that Alexandra is out of danger while the opposite is the case; and most importantly he realizes he is in love with her.

One night Alexandra insists that the doctor tell her the truth: will she die? The doctor stammers, tells her yes, she is in danger, which Alexandra takes as meaning yes, she will die. She confesses her love for the doctor, who is quite distressed at this. He understands that Alexandra is only fighting the idea that she will have died young without having loved, yet he is helpless and confesses his love as well.

Soon afterwards, the daughter reveals to her mother that she and the doctor have pledged their love to each other and that the latter has accepted her ring. The doctor runs from the room with embarrassment. Alexandra dies the next day, telling the doctor "'Perhaps I've acted wrongly towards you ... it's my illness ... but, believe me, I've never loved anyone more than you ... don't forget me ... treasure my ring...'"

The doctor ends his story overcome with emotion; the narrator seizes his hand; the doctor recovers, suggesting a card game, admitting that he has gone for matrimony "with a vengeance," marrying a "spiteful hag." The doctor wins a small sum playing cards, and leaves late, "very pleased with his victory."

Franz Kafka's "The Country Doctor" is a story that cannot be adequately summarized but must be read. In his diary of September 25, 1917, Kafka writes: "I can still have passing satisfaction from works like A Country Doctor, provided I can still write such things at all (very improbable). But happiness only if I can raise the world into the pure, the true, and the immutable."

The story begins with the narrator, a country doctor, in the midst of a blizzard. His horse has died, and he has no way to reach a very sick patient he must see. Bizarrely, from out of the doctor's own pigsty comes a man leading two enormous horses. The horses are yoked to the doctor's gig, and the man indicates that in return for them he will have his way with the doctor's servant girl, Rose. The doctor refuses, but the horses gallop off with him on board, and in a mad rush arrive at the patient's house.

The patient is a boy who throws his arms around the doctor, saying "'Doctor, let me die.'" The doctor examines the patient and finds him sound. A trip wasted, the doctor thinks, and recalls Rose's predicament. But the family will not let him leave and when the doctor re-examines the boy he finds a large wound in his hip, and looking closer in the wound "Worms, as thick and long as my little finger .. with small white heads and many little legs." Now the boy asks "'Will you save me?'"

The family and the village elders then strip the doctor of his clothes, putting him in bed with his patient. He apologizes to the boy for cramping him on his death bed, and perhaps implies that the patient's wound is self-inflicted.

At last he leaves, jumping on one of the horses, not bothering to put on any clothes. But the horses will not gallop now but only crawl. The story ends with the country doctor realizing that his journey home, his practice, and Rose are doomed. "Betrayed ! Betrayed ! A false alarm on the nightbell once answered -- it cannot be made good, not ever."

Some general comments on the discussion that followed:

The Turgenev story raised the issue of sexuality in patient care, and the discussants provided examples of clinical situations where the medical student or doctor's feeling of sexual attraction toward the patient came into play, and how these feelings were handled, both appropriately and inappropriately. This led into a more general discussion of our emotional involvement with patients, and the issues of how to strike a balance between utter detachment and emotional overinvolvement with the patient. Dr. Stelovich offered an alternative interpretation of Turgenev's narrator's role, believing that the hunter takes the doctor's hand not to comfort him but to see if the latter is wearing Alexandra's ring, and in doing so he causes the doctor physical pain.

The Kafka story was more difficult to interpret. Several members found it downright disturbing. The strongly sexual cast of the story, from Rose and the groom to the doctor stripped naked in bed with his patient, was unmistakable, but the ultimate point could be given several interpretations. Appropriately to this, Kafka tells his story in heavily tactile terms, and with imagery from the animal world. It was pointed out that the story ends with a role reversal, the image of limber patients unwilling to help a doctor who is naked, old and feeble.

It was noted that both authors had an amazingly sensitive feeling for the role of the doctor: Turgenev describing excellently a doctor's feeling of helplessness and inadequacy in the face of his or her own ignorance; Kafka portraying the doctor's sense of duty, along with the sense of existential anguish arising from a seemingly normal doctor/patient relationship which goes terribly, terribly awry.

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December 3, 1985

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# PERCEPTIONS OF HEALTH

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**Chapter 29**  
**Perceptions of Health**  
**Meeting of 3 December 1985**

**Presenter: Tal Laor**  
**Host: Tal Laor**  
**Correspondent: Tal Laor**

" . . . my poor dear Alice has long sick-headaches that consume a good many days—she is just emerging from a bad one. Happiness, I have lately discovered, is no positive feeling, but a negative condition of freedom from a number of ~~restrictive~~ sensations of which our organism usually seems to be the seat. When they are wiped out, the clearness and cleanliness of the contrast is happiness."

*Letter to Frances Morse, 1901*

The December 1985 session presented by Tal Laor was entitled "Perceptions of Health." The reading was "At War with My Skin," an article by John Updike, printed in the New Yorker, September 2, 1985.

The author suffers from a disease--"the disease--the disease seems strong, for a condition that is not contagious, painful, or debilitating; yet it has the volatility of a disease, the sense of another presence cooccupying your body and singling you out from the happy herds of normal mankind."

Updike reveals he is afflicted with psoriasis, a generally non-fatal disease, yet one that completely invaded and obsessed his life. In his article, he recounts how he declared "war against the red spots."

The session's discussion rotated between various members of the group who time after time, came up with examples of bodily manifestations that took over their thoughts, dictated their actions and influenced their interactions with other people. Examples ranged from multiple nevi on one's back to curly hair atop one's head. We then turned to the question of how people deal with these self-images. It is possible to see a range of responses--from complete social withdrawal due to shame, to over-achievement as a means of proving oneself. Did Updike turn out to be such a prolific writer because his war against psoriasis was one he had to fight using words as weapons--along with his Siroil, special grease-free diets, and the sun? "Psoriasis," he writes, "keeps you thinking."

As Updike states, his condition supported his narcissism. His body became the center of his world--"strategies of concealment ramify, and self-examination is endless. You are forced to the mirror, again and again." The discussions turned to our own feelings of inadequacy and the ways we have attempted to overcome them. For example, one member who had an extended illness said that at times his sense of creativity and imagination was at a high, as he was the center of his thoughts. Our interpretation was that this hardship allowed or justified a shift in the center of one's universe. Updike fled to the sun of the Caribbean at frequent intervals to bake on the beach. "I wanted to burn; my skin was my enemy, and the pain of sunburn meant that I had given it a blow." His family took on a secondary role as he managed his life schedule around the route of the sun.

Discussion continued with questions being raised as to whether people subconsciously distort their own perceptions of their health to achieve a right to think self-indulgently. After much talk concerning this topic, it was concluded that health and perceptions of it are not necessarily the same, but together they are very powerful forces that can guide and even take over one's existence.



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January 22, 1986

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# ADAPTING TO TRANSITIONS

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Chapter 30  
Adapting to Transitions  
Meeting of 22 January 1986

Presenter: Jennifer Haas and Elizabeth Mort  
Host: Alan Green  
Correspondent: Chris Austin

"Now in all of us, however constituted, . . . does the normal evolution of character chiefly consist in the straightening out and unifying of the inner self. The higher and lower feelings, the useful and the erring impulses, begin by being a comparative chaos within us--they must end by forming a stable system of functions in right subordination."

The Varieties of Religious Experience, 1902

At this meeting, Jennifer Haas and Liz Mort led a discussion on transition, using as springboard readings Chapters 15 and 17 of George Vaillant's book, Adaptation to Life

In attendance: Jennifer Haas, Liz Mort, James Gaudet, Chris Austin, Val Slayton, Shelly Greenfield, Jeffrey Saver, David Eisenberg (a guest of the seminar, an M.D. working with Herb Benson in behavioral medicine), Bob Goisman, Alan Green.

Jennifer opened the meeting by noting that as this is a time of transition for all of us, a meeting on this topic would be interesting and appropriate. She described the Grant Study, on which Adaptation to Life is written: it was conceived as a study of what makes people successful in later life so that college students could be told how they should conduct themselves and adapt to life changes, in order to become similarly successful. It began in 1937 with about 200 men from private colleges, predominantly Harvard, who were screened for positive attributes: intelligence, success in scholarly life, physical appearance, a normal EEG (no kidding). They were followed up periodically, mainly by questionnaires but occasionally by visits from sociologists and psychologists. At the beginning of the study the importance of the study as a future source of instruction to generations of college students was impressed upon the participants, and many of the men came to look on the study as a pivotal force in their lives. For his 30-year follow-up, Vaillant found 90% of the 20-year follow-up's subjects, which amounted to 90 people, and visited all in their homes for up to a week. Alan noted what an extraordinary follow-up rate this was. Jennifer noted that a shortcoming of the study was its limitation to a relatively homogeneous group of white, predominantly Protestant, upper class subjects, as was representative of these private colleges in 1937, noting this was the norm of the time and not Vaillant's doing.

Alan noted that Vaillant later did a similar study of inner city boys followed from 7th grade to 25 years later to look at prognostic factors for delinquency and success, and compared adaptations and coping strategies of the Grant Study subjects to conclusions from this very different socioeconomic and racial group. Vaillant, he said, is a careful investigator whose work should be given thoughtful consideration.

Liz then read an excerpt from Adaptations which was very a propos to the group. It concerned "Dr. Alan Carson" (a pseudonym), a subject in the study, who was reportedly born a "perfect child" who looked and behaved flawlessly throughout all of infancy and childhood. A brief adolescent respite from perfection and foray into motorcycles, sex, and dancing was shortly abandoned as his father was so good "there was not enough to rebel against." He attended Harvard Medical School and did a residency at MGH, a post-doc at Rockefeller, and returned to the warm arms of mama and papa HMS to become assistant

professor of medicine. He was living his father's life, not his own, however, and at age 28 the Thematic Apperception Test (which had been developed just a few years earlier by Murray of Harvard's Psychology department) showed him to be superficial, full of private emotion, dependent on his family and following their dictates, and actively rejecting women and sex. His marriage at 26 to an ascetic woman had been satisfactory enough, and he stopped seeing patients altogether to delve ever more deeply into a consumately mediocre research career. His advancement to Associate Professorship, however, caused him to become so depressed over the true state of his career and marriage that he considered suicide; he subsequently divorced and ceased doing any research in favor of previously spurned private practice. He was found at age 48 to be a charming clinician, under control, and with the same vibrant energy which had characterized his adolescence.

Bob pointed out Vaillant's courageous attempt to answer the question, "what is mental health?", a question DSM-III consciously avoids. He does not define it as absence of mental disease, but rather as adaptations for success and happiness.

Several shortcomings of the study were discussed:

- 1) Alan questioned how the confidentiality of the study subject was kept, considering the sensitive nature of the material; each subject was, we found, given a copy of his section for his approval before publication.
- 2) David Eisenberg brought up the question of the influence of the Hawthorne effect; that by studying the performance of a group, one changes, and most often improves that performance, as the subjects know they are being monitored. Particularly here, when success is being looked at as a paradigm for future generations, it is very possible that some subjects made major life decisions as a result of being studied. An analogy was made to the attention and pressure now being heaped on the first generation of New Pathway folk.
- 3) Vaillant's description of the subjects' defenses may not be valid, Bob pointed out, as two different psychiatrists probably couldn't agree on what mechanisms a subject was using; this may call the conclusions into question if one can't be sure of the measures. Alan pointed out, however, that as Vaillant was the only person evaluating them he served as an internal control, and that a somewhat subjective observer is inherent in psychiatric investigation. Furthermore, as he was of the same socioeconomic and cultural background as the subjects he was probably excellent at evaluating what made them tick and what represented success to them.

James pointed out, in addition, that some of Vaillant's points were generally accepted norms for success: having friends, an income, a stable job and family, and happiness with their fates in life. Chris noted that the results may be more generalizable because of this

requirement for satisfaction, as we are then looking at adaptations which bring one to happiness, whatever that means to the person. Though different groups may have different starting points and goals, the mechanisms used to arrive at these goals may be very much the same.

Pros and cons of the study aside, Alan asked, how does this study apply to us, especially at this transitional time?

Jeffrey found an element of hope that adults continue to grow and change and mature throughout life. He has been worried that one may be, at 25, the person one will be forever, with your response patterns set; this does not seem to be the case.

Liz was impressed by the idea of classifying one's behaviors as reactions and coping mechanisms which can be seen for what they are, allowing one to evaluate how those reactions should change to improve one's prognosis. Vaillant says in his analysis that defenses and other knowledge of personality are not sacred and should be told to patients for their use.

Shelly was skeptical of how voluntary and easy this perceiving and changing was made out to be in the book, and wondered how these personality traits came about. Alan suggested that as in many models of nature-nurture, genetic influences may determine the range of adaptability within which environmental factors work to determine one's exact coping mechanisms, perhaps during childhood. But a major point is that environmental stresses, be they psychological or physical, also work to bring about particular re-evaluations, and adoption of new ways of thinking and behaving not considered in the smooth sailing days of life.

Jennifer qualified Alan's point: while acute conflict does serve as a nidus for growth, chronic stress causes bad outcomes, as measured in the study. Men subjected to chronic stress were unable to marshall forces to extract themselves from distressing situations, and this served to beat down their personalities and outcomes. Why are some people more constitutionally able to handle uncertainty and stress? This returns us to the nature-nurture issue.

David suggested that a sibling model might be useful here. The genetics would be similar, and the same events would have happened to all of them. There are many instances in which one sibling is galvanized to a leadership role given an acute stress like the death of a parent while another introverts and becomes dysfunctional.

Jeffrey pointed out that this model might actually be worse, as

siblings are often given certain roles in these situations according to their place in the family hierarchy, so the quantity and kind of stress felt by each sibling may be quite different and the use of sibling controls will have failed to isolate purely genetic factors.

One seminar member illustrated just such an occurrence after his father's mother died when he (the father) was 12½ years old. The father was told he was to be the man of the family, responsible for even the funeral of this father. His sisters, on the other hand, were allowed to go on being children, with no major change. This shaped their lives in different ways, the father losing his childhood and his sisters keeping theirs at the expense of having a more difficult passage into adult life later on.

Chris thought a good point Vaillant makes is that of DSM-III Axis II diagnoses often being a manifestation of healing, not of ongoing psychopathology, given situational stresses. We most often encourage resolutions to restore normal functioning as soon as possible but regression in the service of the ego can be a very useful phenomenon.

Alan recalled Vaillant's analogy of inflammation around a fracture being a useful and necessary phenomenon to heal the fracture; we need, he said, to avoid putting psychological steroid cream on our patients to prevent this from occurring.

Chris was perplexed by the implications of Vaillant's point that any one decision these subjects made in their lives did not affect their long-term outcome, comforting though it is in these days of major decision-making about residency. Sure, it doesn't matter whether you go to New York, Baltimore, San Francisco, or Boston; but he thought this about his decision about medical school as well. How many individual decisions don't matter before their cumulative effect does? Or does one conclude that decisions in general don't affect outcome, a modern-day equivalent to the Calvinist doctrine of predestination.

Shelly answered that each decision is followed by an entirely new set of experiences, changing life but not necessarily making it better or worse. So the decisions do matter for determining these experiences, but how the experiences are interpreted depends on personality structure. This is a circular effect of course: decisions are made because of ego structure and ego structure is derived from decisions and the situations and people one confronts as a result.

Jeffrey quoted one of Vaillant's conclusions to us: "Individuals capable of homeostasis (preserving their ~~physiological~~ equilibrium) survive. The healthy individual is...capable of conservation and assessing personal costs. Hans Selye is wrong: it is not stress that kills us. It is effective adaptations to stress that permits us to live." Jeffrey wondered whether Vaillant wasn't overstating his point a bit to say that Selye was wrong, for his writings agree with Vaillant's. Both point out the importance of stress at certain times in bringing about personality change. The 20 adaptive styles defined by Vail must be searched for in an individual to evaluate the success of their coping. David added that healthy distancing from stress is what psychotherapy, behavior therapy, and meditation are all about.

Alan pointed out that conversely, those without stress in their lives often do not grow. He discussed news reports from a few weeks before about a newspaper family in Kentucky whose members were at each others' throats over inheritance. The father and owner had gone to great lengths to smooth over all family conflict previously, and his family was now falling apart precipitously under such stress.

A seminar member agreed completely, relating the situation of his friends of his family he had visited for the first time in several years while on the residency interview trail. They had always lived in beautiful homes, had successful careers, and every event had always been portrayed in its most positive and happy vein, even when objectively the event was disastrous. They had actively, as had the Kentucky family, suppressed and smoothed over conflict and stress. The seminar member found on his trip, though, that the house of cards had collapsed: the father was in the hospital with liver disease from long-uncontrolled alcoholism; the parents' marriage, along with those of two offspring was collapsing; the two children were unemployed. This striking disjunction of facade and reality made him think of stress as a balloon: one can compress it at one end but it always comes out, though perhaps in a different form, somewhere else. If one does not devise an effective coping mechanism, stress will not go away for being ignored. It will return with a vengeance.

As Jeffrey suggested a conclusion due to the late hour, James offered a final hopeful note. He suggested that the healthfulness of stress we have spoken of for the individual is applicable on a global scale as well. The world is getting smaller every day, and in a very real sense we are growing up, and growing together, as a world. We may, with some luck, emerge from the currently stressful period in world politics with a greater understanding of earthly adaptations. Only then will we be successful as a planet, accepting each other as parts of a single interdependent enterprise and acting accordingly.



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February 19, 1986

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# TRANSFERENCE AND COUNTER-TRANSFERENCE IN DOCTOR-PATIENT RELATIONSHIPS

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Chapter 31

Transference and Counter-Transference in Doctor-Patient Relationships  
Meeting of 19 February 1986

Presenter: Shelly Greenfield and Sarah Feldman

Host: Robert Goisman

Correspondent: Jeffrey Saver

"You have a far more logical and orderly mode of thinking than I. . . . and whenever we have been together I have somehow been conscious of a reaction against the ascendancy of this over my ruder processes--a reaction caused by some subtle deviltry of egotism and jealousy, whose causes are untraceable by myself, but through whose agency I put myself involuntarily into a position of self-defense, as if you threatened to overrun my territory and injure my own proprietorship. I don't know whether you ever noticed any such thing,--it is hard to define the subtleness of it. . . . I guess that were we to meet now I should be less troubled with it."

Letter to Oliver Wendell Holmes, Jr., 1868

The psychodynamics of the physician-patient relationship were the subject of the February 1986 meeting of the Seminar, held at Bob Goisman's home. Sarah Feldman and Shelly Greenfield, the joint presenters, asked seminar members to devote particular attention to issues of countertransference--the feelings, rational, and especially irrational, that encounters with patients engender in doctors. In reflecting upon the readings and our own experience, they asked, that we "try to remember cases where you experienced countertransference feelings as a major element in your care of the patient." With such instructions, seminar members looked forward to an intriguing and provocative discussion. They were not disappointed.

The readings for the session provided a diverse array of views on the essential character of physicians' countertransference emotions and attitudes. B. Lewin, in his "Counter-Transference in the Technique of Medical Practice", a paper written in 1942, contrasts the development of the countertransference in analytic training with that in other fields of medicine, "or for that matter of the analyst in his medical school days". The analyst begins by unconsciously identifying with his patients, reacts by repressing this attitude and becoming too detached, and ends by striking an appropriate balance. In contrast, Lewin claimed--but many seminar members disagreed in the discussion that followed--, the physician who begins his training working with cadavers in anatomy labs and learning basic science initially unconsciously desires that his live, human, complex patients in the clinic should be more like the simple, malleable corpses of the pre-clinical years.

The discussants found more plausible Jay Katz's discussion of countertransference in *The Silent World of Doctor and Patient*. Katz argues that we need to extend our understanding of countertransference beyond the traditional view of the personal responses, conscious and unconscious, that the transference of the patient evokes in the physician. A broader recognition of the attitudes that distort patient-doctor relations would also acknowledge the

"deeply engrained professional attitudes" doctors themselves bring to clinical encounters, including the pernicious tendency to "view themselves as too rational and their patients as irrational".

Members found particularly challenging and illuminating the third reading, which Sarah and Shelly had selected as a literary "case study"--William Carlos Williams' short story, "The Use of Force". Williams' physician-narrator is called to see a sick child in the home of a family he has not treated before. Without saying so out loud, both the physician and parents were concerned the child might have diphteria. The girl, however, refused to open her throat so her tonsils might be examined. The doctor feels a number of powerful feelings toward his stoutly resistant patient, including love. In the end, in "a final unreasoning assault" the physician physically overpowers the girl's resistance and discovers the secret "she had fought valiantly to keep me from knowing":membrane-covered tonsils diagnostic of diphteria.

In the evening's discussion seminar members agreed that their experience jibed with Lewin's suggestion that there are stages in the evolution of countertransference, but not the particular, unusual ones he ascribed to medical training. Rather, all agreed they had undergone a process of identifying with, de-identifying with, and lastly attaining a more flexible perspective on patients in their care. Members noted that the Williams' story highlighted one aspect of countertransference neglected in the didactic essays--the ways in which medical necessity may force doctors and, doctors-in-training, to behave coldly, despite the distresses not only patients, but physicians themselves feel. When patients respond with strong emotion, and physicians react to the patient's feelings, the physician-patient relationship is colored by attitudes engendered, not by unconscious motivations, but by the inescapable structure of medical practice. Many members recounted anecdotes from their own clinical experiences of difficult and emotion-charged physician-patient relationships. Members ended the meeting with a discussion of how best to recognize and respond to countertransference, for the sake of both physician and patient.

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March 12, 1986

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# A CONSIDERATION OF "WHY MEDICAL SCHOOL IS CALLED DEHUMANIZING"

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## Chapter 32

A Consideration of 'Why Medical School is Considered Dehumanizing'  
Meeting of 12 March 1986

Presenter: Paul Unger

Host: Alan Green

Correspondent: Dan Barboriak

"'To miss the joy is to miss all.' . . . Yet we are but finite, and each one of us has some simple specialized vocation of his own. And it seems as if energy in the service of its particular duties might be got only by hardening the heart toward everything unlike them. Our deadness toward all but one particular kind of joy would thus be the price we inevitably have to pay for being practical creatures."

"On a Certain Blindness in Human Beings," 1899

The reading was an article by Gordon Harper MD, a physician at Boston Children's Hospital, entitled "Why is Medical School Called De-humanizing?" His purpose in writing the article was to outline some of the changes which occur to students in the medical school years. His major thesis is that while medical school is dehumanizing in the sense that most mean it -- i.e. that the hours are long, the information base huge, the teaching inadequate -- medical school is also dehumanizing in a more fundamental way. It forces us to reorient ourselves to taboos about the body and its products. In the process of breaking taboos about the body by such activity as the introduction of needles under another person's skin, or the collection and examination of another's sputum, urine etc. medical doctors break those rules that normally govern the relations humans have with each other. In this sense to become a doctor is to separate oneself from the remainder of humanity. In fact, the different medical specialties can be defined in terms of the basic taboos that are broken as a routine part of their jobs.

Harper goes on to criticize the current state of medical education on the one hand for not providing a forum where the stress of breaking these taboos can be expressed and dealt with; and on the other hand he provides suggestions (acknowledging the student's actual situation, supporting student "wholeness," group cohesion, etc.) for dealing with the inevitable psychological dislocation which occurs with a medical education.

Discussion began with a review of last month's meeting, cut prematurely short, centering mainly on WC William's short story "The Use of Force." Alan G. acknowledged that there was a need to get information in medicine, and that there was a possibility in the story that if the doctor hadn't used force to look in the girl's throat she may have died; but the main point of the story was that the doctor had almost completely lost control, and that this was evidence that something deeper was going on.

Paul U. said that Harper's article brought him a sense of closure at the end of his medical school career. He made the distinction between two types of dehumanization, the outer dehumanization of disruption of "normal" life patterns, sleep, social life; and the inner dehumanization in which one loses oneself, or more precisely the self which one once was. We change from wondering "Does the IV hurt?" to wanting to put them in. He discussed some of the taboos we've overcome on the way, including "Don't put your fingers in another's orifices," "Don't be nosy," "Don't cause pain," "Don't undress people...."

Shelley G. agreed that a major task seemed to be undoing taboos and yet there was no room to deal with these issues.

The group discussed examples of incidents where we as students were confronted with these taboos, including: Dealing with body fluids, having to culture one's own feces; having to serve as either demonstrator or demonstrator in blood drawing exercises; beginning in anatomy lab; dog lab. It was noted that after anatomy one's attitude towards donating one's body to science could easily change; and that attitudes change so dramatically that jokes previously considered

tasteless become hilarious in the context of the medical school 2nd year class

Dan B. told of his discomfort as an ICM preceptor in indirectly teaching students to ignore a patient's immediate concerns in order to "get a good history." Shelley G. noted that different students have different styles in dealing with the problems they are having, and that it's important to recognize this.

The discussion turned briefly onto the idea of designing an ICM in which students learn the basics, including genital exam, rectal exam and blood drawing, from each other. Steve S. thought that if this approach were taken and the questions and problems which arose could be dealt with, this might be a valuable tack. Others felt uncomfortable with the idea of doing exams such as pelvic exams on one another. It was suggested that this would be breaking down the taboo in a way that perhaps was unacceptable. Someone noted that during the teaching of the pelvic exam at one institution's ICM, a discussion of what the volunteer model's experience of the pelvic exam was like was very helpful.

Steve S. talked about a tutor at Harvard College and his theory of education: that a student who comes to Harvard should be "shaken up" -- farm boys should read Kafka, Easterners Dickinson. If the student was intelligent, the theory goes, he or she would integrate the experience and reach a new equilibrium that was superior to the old. Steve went on to say that this seemed to be part of the idea behind medical education -- to "shake people up" -- but that somehow this doesn't work. He wondered why. Is the shake-up too profound?

Paul U. decried the lack of role models in medical education; too often the neurologist asks "where is the lesion?" rather than holding the patient's hand.

Shelley stated that the idea that the doctor is dehumanized, and therefore he or she dehumanizes patients, overlooks that something deeper is going on, that issues don't get dealt with and this leads to frustration, anger and depression in the student.

The tape recorder was halted for the retelling of personal stories of the dehumanization in medical education as well as other topics

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April 16, 1986

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# PSYCHOCARDIOLOGY

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Chapter 33  
Psychocardiology  
Meeting of 16 April 1986

Presenter: James Gaudet  
Host: James Gaudet  
Correspondent: James Gaudet

"Now no type can be wholly disadvantageous; but, so far as our type follows the bottled-lightning fashion, it cannot be wholly good. . . . Your dull, unhurried worker gets over a great deal of ground, because he never goes backwards or breaks down. Your intense, convulsive worker breaks down and has bad moods so often that you never know where he may be when you most need his help. . . . We say that so many of our fellow-countrymen collapse . . . because they work so hard. I suspect that this is an immense mistake. I suspect that neither the nature nor the amount of our work is accountable for the frequency and severity of our breakdowns, but that their cause lies rather in those absurd feelings of hurry and having no time, in that breathlessness and tension, that anxiety of feature and solicitude for results, that lack of inner harmony and ease, in short, by which with us the work is so apt to be accompanied."

"The Gospel of Relaxation," 1899

Members Present: Robert Goisman, Jeff Saver, Jennifer Haas, and James Gaudet

James started the meeting by explaining how he came to decide on the topic of psychocardiology. He then summarized the London Bus Driver Study which was originally designed to prove that exercise lowered the incidence of coronary heart disease, but when later reexamined and redesigned, came to suggest that stress was associated with later rates of heart disease. It was then pointed out that the reading spoke of three large and recent studies which proved rather strongly that CHD was related to Type A Behavior. The floor was then opened to discussion.

First discussed was the fact the the concept of Type A Behavior, only a few years back, was quite popular, but now it is rare for most internists to consider it as a major risk factor. The next area of consideration involved thinking about mechanisms that would cause CHD in the face of a Type A Behavior pattern. One paper showed an increase of epinephrine, norepinephrine, and cortisol in Type A subjects when doing mental tasks. The concept of voodoo death was also brought up. It was then questioned if there was a difference between CHD rates in people with anxiety disorders and people with Type A Behavior. James quoted a study which looked at a group of doctors and their health status 20-30 years after med school. All had taken the MMPI while in med school, and those who had higher scores on the hostility scale had the higher rates of CHD, making it seem that anger more than anxiety was the major risk factor.

The next issue to be discussed was the possibility of changing Type A Behavior. James spoke of one study with a large group of people who were Type A and had had MI's. One group was given the usual post-MI counseling and a second group was given the same counseling plus Type A Behavior reduction counseling. It was shown that the Type A reduction group lowered their Type A Behavior and also had lower rates of recurrence of cardiac events. A point was made that behavior therapy is energy requiring and that many people might be non-compliant with Type A reduction counseling, but that type A's may like this structure and goal-oriented type of therapy.

In regards to mechanism again, the members began to wonder if there was a differential effect of epinephrine and norepinephrine. Jeff pointed out that in certain studies it seemed to be that the ratios of norepinephrine to epinephrine released by affective stimuli in monkeys and man were emotion specific. Anger and fear, for example, were associated with a different peripheral catecholamine profile.

Presently, no one speaks of Type A Behavior as a major risk factor for CHD and in our education it is neglected. Jennifer felt that as a primary care physician, she would find it hard to determine who was Type A, and because of this she would be reluctant to force behavior therapy on them. A guest of the seminar, a visiting psychiatrist from China, then spoke, reminding us that we should not only consider Type A Behavior, but the many other social and psychological factors that can be implicated in the genesis of many different diseases.

The meeting ended when it was noted that we all seemed to agree that Type A Behavior was a risk factor for CHD and that it would be our challenge to convince the rest of the medical field to consider it more seriously also.

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May 14, 1986

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# THE MEANING OF LIFE: THE DASEINANALYSE OF LUDWIG BINSWANGER AND THE WISDOM OF WILLIAM JAMES

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## Chapter 34

The Meaning of Life: The Daseinanalyse of Ludwig Binswanger,  
the Wisdom of William James  
Meeting of 14 May 1986

Presenter: Jeffrey Saver  
Host: Alan Green  
Correspondent: Jeffrey Saver

"When (an individual) debates, Shall I commit this crime? choose that profession? accept that office, or marry this fortune? --his choice really lies between one of several equally possible future characters. What he shall become is fixed by the conduct of this moment. Schopenhauer, who enforces his determinism by the argument that with a given fixed character only one reaction is possible under given circumstances, forgets that, in these critical ethical moments, what consciously seems to be in question is the complexion of the character itself. The problem with the man is less what act he shall now choose to do, than what being he shall now resolve to become."

The Principles of Psychology, 1890

"For my own part, I do not know what the sweat and blood and tragedy of this life mean, if they mean anything short of this. If this life be not a real fight, in which something is eternally gained for the universe by success, it is no better than a game of private theatricals from which one may withdraw at will. But it feels like a real fight,--as if there were something really wild in the universe which we, with all our idealities and faithfulness, are needed to redeem. . . . For such a half-wild, half-saved universe our nature is adopted. . . .

These, then are my last words to you: Be not afraid of life. Believe that life is worth living, and your belief will help create the fact."

"Is Life Worth Living?", 1895

The final regular meeting of the William James Seminar, Assembly '82, took place at the apartment of Alan Green. With many members scattered to distant lands on final voyages of adventure before beginning residency training, a small, but hardy quorum was in attendance: Daniel Barboriak, Alan Green, Shelly Greenfield, Jeffrey Saver and Scott Solomon.

The subject of the meeting was no less weighty a theme than "the meaning of life". Jeff said he chose this topic thinking it alone could provide an appropriate note of profundity on which to end a series of dialogues which had already dissected such topics as the nature of love, death and dying and the nature of madness. In preparation for the gathering, seminar members had read excerpts from the writings of William James and Ludwig Binswanger. James' aim in "On a Certain Blindness in Human Beings", one of his Talks to Students on Some of Life's Ideals, is "to make you feel how soaked and shot-through life is with values and meanings which we fail to realize because of our external and insensible point of view." Each man or woman knows intimately his or her own rich internal world--the cherished hopes, the dearly loved memories, the moments of transport in response to nature or a religious feeling. But we who observe them from the outside are cut off, it seems, from this vivid and vitally important internal realm. "The meanings are there for the others, but they are not there for us." Related points in the supplementary Binswanger essays included the view Binswanger developed in "Heidegger's Analytic of Existence and Its Meaning for Psychiatry" of psychiatry as seeking to understand man as both biological organism (objectively) and as Other ("transcendent subjectivity"), both perspectives having a common origin in the existential ontology of man as Dasein. More concretely, in "Introduction to Schizophrenie", Binswanger discussed four schizophrenic patients and attempted to describe in detail their internal world-views and the precise phenomenologic course of their descent into psychosis.

Jeff, the meeting's moderator, opened the session by noting that at the seminar's first regular meeting three and one-half years earlier, members had pondered the depression of the young William James. He hoped that the James essay distributed for this final regular seminar session would provide a suitable closing of the circle of our discussions, as

well as a view of the invigorating, mature thinker James went on to become. He cautioned, however, that "On a Certain Blindness..." did not represent James' final views on the matter of the meaning of life. The essay was more a transitional resting stop than final anchor. Jeff added that he had then included the Binswanger readings for the group to peruse hoping that seminar members and he might together test the waters of the German tradition of existential psychodynamic psychotherapy. He wondered if the existential "school" in psychiatry was relatively neglected in current medical school curriculums, despite its vitality in American practice only a little more than a decade ago. Also, he hoped members might be struck by parallels and contrasts between the (pre)existentialist strain in James (later semi-neglected in American thought) and the fully developed and systematized existentialist outlook of Binswanger.

Jeff then initiated the discussion by putting James' observations in "On a Certain Blindness..." into a medical context, "for what else is James talking about but our capacity for empathy". He felt that physicians in general, and psychiatrists in particular, are entrusted by patients with a limited access to precisely that internal realm of the human mind which James tells us is usually out of our view. Shelly said she was drawn to James' argument that our chronic inability to see into others' internal worlds leads us to misjudge the value others perceive in their lives. This was a suspicion she often had on intensive care units, for example. Communicating with very ill patients, who sometimes are instrumented or aphasic, is so difficult as to virtually preclude the possibility of sympathetically entering into their own outlooks on life. All too often, Shelly suggested, medical personnel rush into this vacuum with their own strongly held views on issues of quality of life.

(In the rest of the evening's discussion, members addressed a number of intriguing issues raised by the readings. Unfortunately, printing deadlines force an abbreviated account of what followed.)

Spurred by the force of James' arguments for the hidden worth of others' experiences, seminar members pondered the value that lies in the very different subjective experiences of patients with various altered mental states, e.g. the psychotic unrealities of schizophrenics, the religious experience of some patients with temporal lobe epilepsy, the singular mental universes of patients with neurological illnesses. Seminar members suggested that mental illness is in general a distressing and crippling business, but perhaps in a few cases the medical profession is too quick to intervene and "cure" unique subjective perspectives. Examples from members clinical experiences were offered. The philosophical problem of other minds was then discussed. Members briefly grappled with

the intricacies of Binswanger's thought, but then returned to the more congenial Jamesian world-view.

Having discussed the ethical dilemmas that come from valuing (appreciating too well) altered mental experience, members next considered the difficulties of coming to know (appreciating at all) the interior world of the patient--whether in once a year office visits or daily analytic hours. Members again discussed examples from their own clinical experiences, now illustrating moments of breakdown of communication and the limits of empathetic ability. The faculty member present (Alan Green), however, offered a more optimistic view, and specific suggestions of techniques and strategies for gaining an authentic understanding of the experience of the patient.

The meeting ended with a brief, more direct discussion of the "meaning of life". Members were dissatisfied with the passiveness of James' outlook in "On a Certain Blindness..." Deep, moving transports, the value of which James defended, seemed in his account to visit individuals unbidden. What of those unlucky enough to not often receive such moments of enveloping joy. A quote from the mature James, representing more closely the final position he adopted after his youthful despair and this transitional period, was read. (The full passage appears as the second epigraph for this chapter.) "(I)t feels like a real fight,--as if there were something really wild in the universe which we...are needed to redeem....These, - then, are my last words to you: Be not afraid of life. Believe that life is worth living, and your belief will help create the fact." It was with this thought that the seminar ended its final regular meeting.



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June 2, 1986

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# PARTINGS: THE FINAL MEETING

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Chapter 35

Partings: The Final Meeting  
Meeting of 2 June 1986

Presenters: The Members of the William James Seminar, Assembly '82

Host: The Spirit of William Dean Howells

Correspondent: Jeffrey Saver

"One's ancient affections seem the abidingly real part of it all."

Letter to William Dean Howells, 1910,  
written two weeks before James' death.

The last meeting of the William James Seminar, Assembly '82 took place at the William Dean Howells house in Kittery Point, Maine. Attending the meeting were: all of the members of the seminar, either in the flesh or in spirit.

In the course of the day, members received copies of Of Flame and Clay, the collected accounts of the group's three-and-one-half years of meetings. With much fanfare, and genuinely deep gratitude, the student members of the seminar presented gifts to the group's four faculty members.

Then, in the day's discussion, group members recalled the origins of the seminar in their HMS I & II years, and the evolution of the Assembly as first it forged a special cohesiveness and identity in that pre-clinical period and then adapted to meet new challenges as student members made the transition from lecture hall to ward. Students and faculty reminisced over particular meetings, over charged discussions that had addressed issues of urgent concern in members' evolving professional and personal lives, over the readings that had reshaped members' thinking--and the readings that had helped members to slumber--, over exchanges amusing and unsettling, moments mad and moving.

And, after thus looking back over all we had shared in the course of our three-and-one-half years together in the seminar, the Assembly reached its final conclusion, agreeing with William James that, when all is said and done, it is the friendships one has formed that hold the deepest, the most precious, and the most lasting significance:

"One's ancient affections seem the abidingly real part of it all."



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## THE WILLIAM JAMES SEMINARS

Of Flame and Clay records the experience of a group of Harvard Medical School students and faculty seeking to attend to matters of mind as well as of body, to affirm that medicine is an intrinsically humanistic discipline, despite frequent pressures to the contrary in present-day medical education and clinical care. In an educational experiment pioneered four years ago by Professor J. Allan Hobson and christened the **William James Seminars**, medical students and faculty joined to supplement the factual and passive learning of the lecture hall with the conceptual and deliberative learning of another educational mode: small group discussions grounded on common readings examining the central issues of modern behavioral medicine and of contemporary medical training.

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